1. INVENTORY

1.1. BACKGROUND

The inventory chapter provides an overview of Erie International Airport – Tom Ridge Field (ERI or the Airport), including its ownership, physical facilities, operational characteristics, support facilities, land use, and zoning. This information was obtained through on-site investigations of the Airport, interviews with airport personnel, and review of published information. Information was also obtained from available planning documents and studies concerning the Airport and surrounding areas.

1.1.1. Airport Background and History

ERI is a publicly owned airport located in Millcreek Township, Erie County, Pennsylvania, approximately five miles southwest of the City of Erie. The National Plan of Integrated Airport Systems (NPIAS) designation for ERI is publicly owned, small, non-hub, commercial service-primary airport with 109,185 total enplanements according to the 2015 NPIAS.

ERI traces its history to the 1920s when the area near West Lake and Asbury Roads was known as Griswold Landing Field. The field was licensed as a commercial airport by the U.S. Department of Commerce, Airways Section and named Great Lakes Airways, Inc., PA.

In January 1936, the City of Erie announced plans to sponsor a Class A – 1 Municipal Airport and made agreements with property owners to lease land for the proposed airport. Later that year improvements began, including expansion to the airfield, drainage systems, hard surface runways, and hangars. The original terminal building was located at the west end of the Airport near Asbury Road.

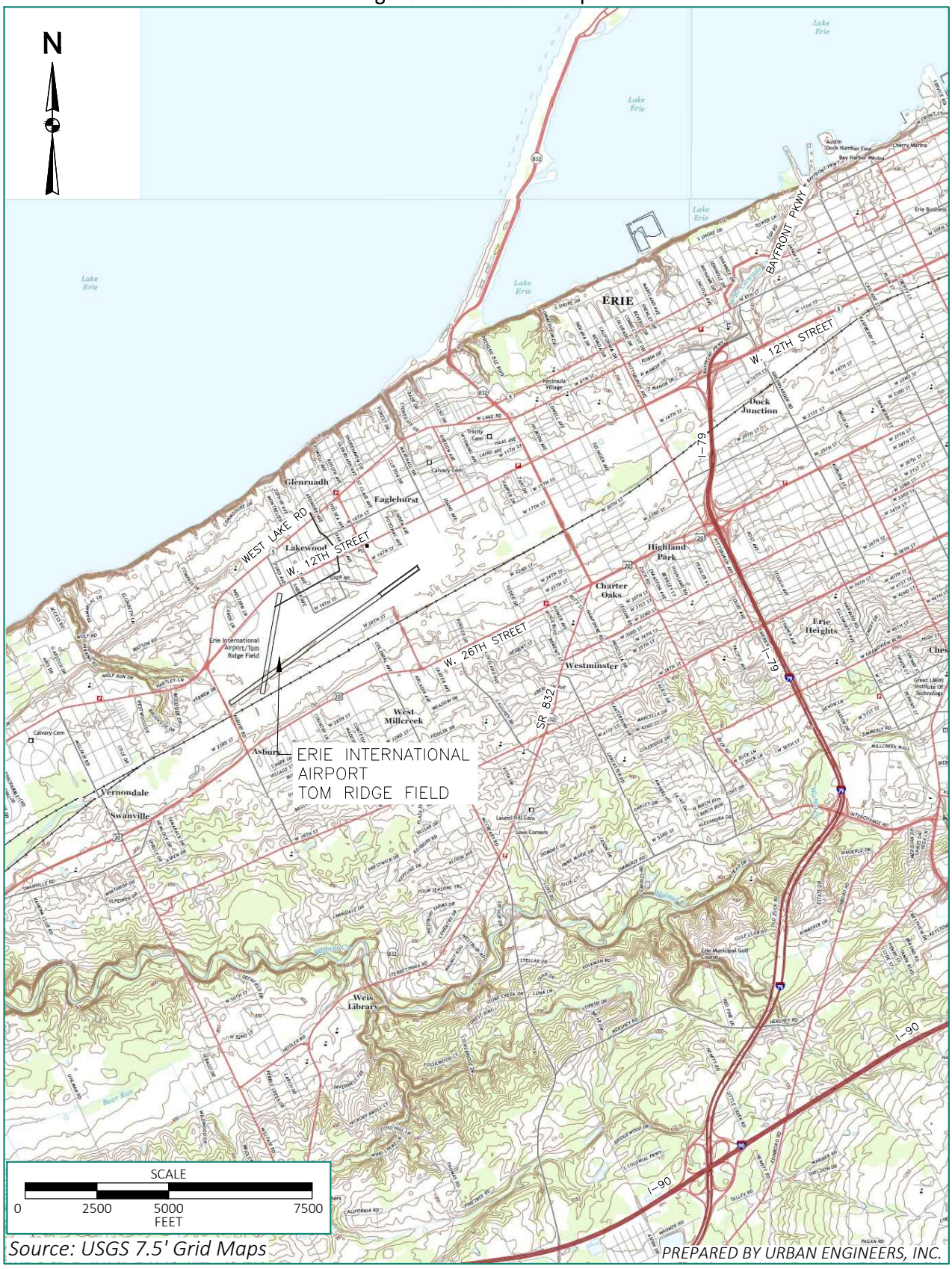
The Erie Municipal Airport Authority (EMAA) was formed in 1951 and the City of Erie deeded land holdings to the newly formed Authority. The EMAA is now known as the Erie Regional Airport Authority (ERAA). Today ERI covers an area of over 450 acres. Construction of the current terminal building began in 1956 and included the Air Traffic Control Tower (ATCT), which was opened in 1957, followed by the terminal opening in 1958.

In the following years, additional expansion and improvements to the terminal and airfield facilities were completed including runway expansions, apron construction, maintenance and emergency facilities, U.S. Customs building, weather station, parking facilities, and terminal expansions. ERI completed a major extension and upgrade of Runway 6-24 in 2015.

1.1.2. Location

ERI is located in Millcreek Township, Erie County, approximately five miles southwest of the City of Erie in northwestern Pennsylvania and less than one mile from the shoreline of Lake Erie. A location map is shown in **Figure 1-1**. The Airport is located at 42° 4′ 59″ N latitude, 80° 10′ 26″ W

Figure 1-1: Location Map



Source: USGS 7.5' Grid Maps

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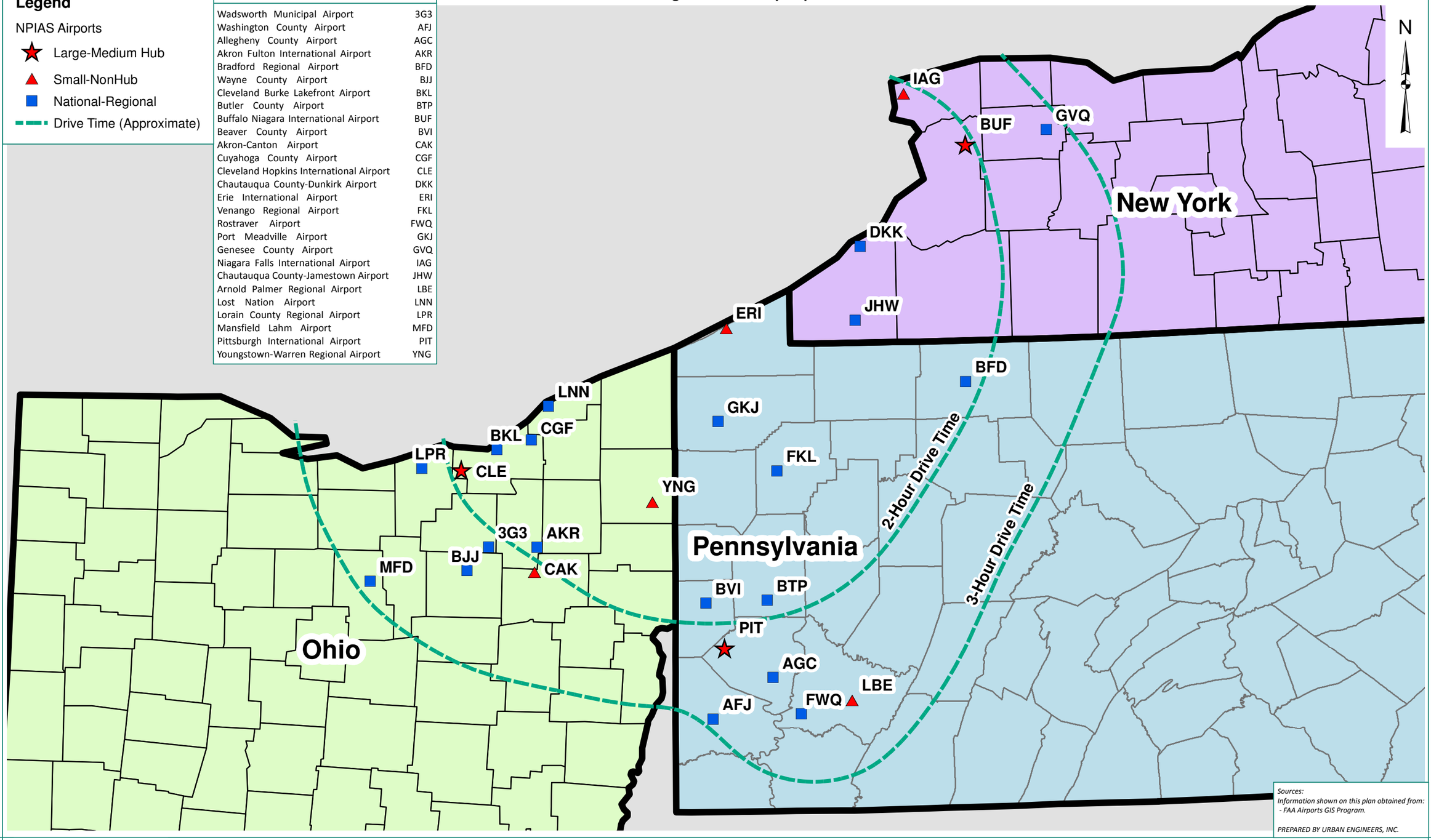
Figure 1-2: Vicinity Airports

Legend

NPIAS Airports

- Large-Medium Hub
- Small-NonHub
- National-Regional
- Drive Time (Approximate)

Airport Name	Designation
Wadsworth Municipal Airport	3G3
Washington County Airport	AFJ
Allegheny County Airport	AGC
Akron Fulton International Airport	AKR
Bradford Regional Airport	BFD
Wayne County Airport	BJJ
Cleveland Burke Lakefront Airport	BKL
Butler County Airport	BTP
Buffalo Niagara International Airport	BUF
Beaver County Airport	BVI
Akron-Canton Airport	CAK
Cuyahoga County Airport	CGF
Cleveland Hopkins International Airport	CLE
Chautauqua County-Dunkirk Airport	DKK
Erie International Airport	ERI
Venango Regional Airport	FKL
Rostraver Airport	FWQ
Port Meadville Airport	GKJ
Genesee County Airport	GVQ
Niagara Falls International Airport	IAG
Chautauqua County-Jamestown Airport	JHW
Arnold Palmer Regional Airport	LBE
Lost Nation Airport	LNN
Lorain County Regional Airport	LPR
Mansfield Lahm Airport	MFD
Pittsburgh International Airport	PIT
Youngstown-Warren Regional Airport	YNG



Sources:
Information shown on this plan obtained from:
- FAA Airports GIS Program.

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longitude and elevation 732 mean sea level (MSL). ERI is accessible from West 12th Street (State Route 5), which serves as a major east-west route through the Erie area. West 12th Street links the Airport to other major area roadways including Interstate 79 and the Bayfront Connector (State Route 290), which provide access to Interstate 90.

1.1.3. Organizational Profile

ERAA, a Pennsylvania Municipal Corporation, is governed by a nine-member Board of Directors (the Board). The Erie City Council appoints five members and Erie County Council appoints four.[1] The Executive Director of ERI, who the Board of Directors appoints, oversees the day-to-day operations of the Airport. The Airport's other 32 employees assist the Executive Director, and have the following departmental distribution:

- Administrative staff (five persons),
- Equipment specialist (one),
- Electrician (one),
- Airfield operations/aircraft rescue and firefighting (seven),
- Building maintenance (one),
- Landside (one),
- Custodians (four), and
- Public safety (12).[2]

The Board and the Airport's employees are subject to the Pennsylvania Public Official and Employee Ethics Act, Act 170 of 1978[3] and associated regulations (51 Pa. Code §11.1, et seq.).[4] These rules and regulations, which the Pennsylvania State Ethics Commission enforces, guide the Airport's code of conduct and ethics. This includes a list of restricted activities such as conflicts of interest and accepting anything of monetary value in exchange for influence.

1.1.4. Airport Service Area

The service area of ERI includes the Erie Metropolitan Statistical Area of Erie County, as well as other counties in the tri-state region of northwestern Pennsylvania, western New York, and eastern Ohio. **Figure 1-2** depicts other hub, non-hub, and general aviation airports in the vicinity of ERI.

Commercial Service Airports in Vicinity

ERI is located two hours or less from several other commercial service airports in the tri-state region of Pennsylvania, New York, and Ohio. ERI offers non-stop service to Chicago, Detroit, and Philadelphia. Larger international airports such as Buffalo Niagara International, Cleveland

[1] Erie International Airport. (2016). *Board of Directors*. Retrieved 1 May 2016, from http://www.erieairport.org/board_directors.html
[2] Erie International Airport. (2016). *Airport Staff*. Retrieved 1 May 2016, from http://www.erieairport.org/airport_staff.html
[3] Pennsylvania State Ethics Commission. (1978). *Ethics Standards and Financial Disclosure.* Retrieved 15 June 2016, from http://www.ethics.pa.gov/Ethics-Act/Ethics-Act/Pages/default.aspx
[4] Pennsylvania State Ethics Commission. (1993). *The Ethics Regulations*. Retrieved 15 June 2016, from http://www.ethics.pa.gov/Ethics-Act/Ethics-Regulations/Pages/default.aspx

Hopkins International, and Pittsburgh International offer a greater number of non-stop destinations and airlines. Other commercial service airports offer non-stop flights to leisure destinations in Florida, Georgia, and South Carolina. **Table 1-1** shows additional information about the nearby commercial service airports.

Table 1-1: Nearby Commercial Service Airports

Airport	Distance from ERI (NM)	Enplanements	Airlines	Destinations
Youngstown–Warren Regional Airport (YNG)	54	65,983	1	4
Buffalo Niagara International Airport (BUF)	82	2,378,469	6	24
Niagara Falls International Airport (IAG)	82	111,212	2	5
Cleveland Hopkins International Airport (CLE)	85	3,686,315	8	35
Akron–Canton Airport (CAK)	90	771,155	5	16
Pittsburgh International Airport (PIT)	96	3,827,860	12	45
Arnold Palmer Regional Airport (LBE)	114	128,415	1	5

NM – nautical miles
Source: 2014 Air Carrier Activity Information System.

General Aviation Airports

Several general aviation - national/regional airports are located within a three-hour drive of ERI and are shown in **Figure 1-2**.

Weather Conditions

Erie's climate is influenced by polar and tropical air masses and its proximity to Lake Erie. These factors result in highly varied and changeable weather in terms of cloud cover and precipitation. Lake Erie often has a moderating effect on temperature conditions. Temperatures of well below zero degrees Fahrenheit over Canada and the Midwest are typically raised crossing the Great Lakes. As a result, temperatures below zero degrees are limited to about three days annually. The lakes also have a cooling effect in the summer and temperatures of 90 degrees and above are infrequent. Winds blow off Lake Erie, which lies to the northwest. While the lake encourages a relatively consistent wind direction, it also increases wind velocity. July is the hottest month of the year with a mean daily maximum temperature of 79.8 degrees and January is the coldest month with a mean daily minimum temperature of 20.8 degrees.

Precipitation is distributed relatively evenly throughout the year, and amounts to approximately 42 inches annually. Monthly rainfall is between 2.4 and 4.6 inches. Cloud cover is more prevalent during the colder months.

Flying in the winter months can be limited by a weather phenomenon known as lake effect snow. The prevailing westerly and southwesterly winds blow across Lake Erie and pick up moisture which is deposited as heavy snow along the lakeshore regions. Annual snowfall is approximately 100 inches.

1.2. AIRSIDE FACILITIES

Discussion of airport facilities in this report will be divided into airside and landside sections. Airside facilities are associated with the taxiing, takeoff, and landing of aircraft (i.e., the airfield and its components) and are discussed under the following headings:

- Runways
- Taxiways
- Visual and Navigational Aids

The locations of the runways and taxiways are depicted in the ERI airport diagram, **Figure 1-3**.

1.2.1. Runways

ERI has two runways: the primary runway is Runway 6-24 and Runway 2-20 is the crosswind runway. Additional runway information is provided in **Table 1-2** and below.

Table 1-2: Runway Strength and Declared Distances

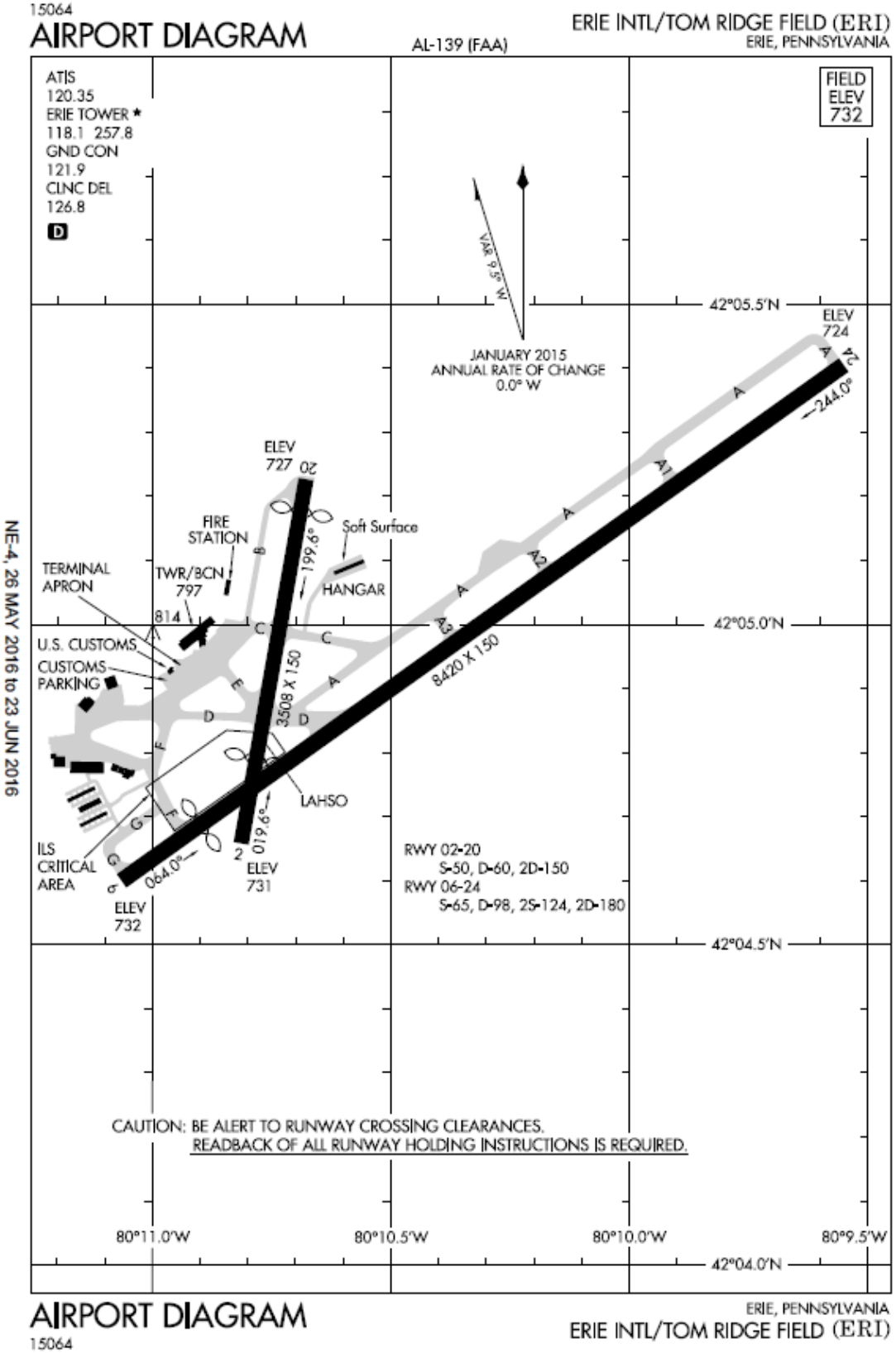
Runway	6/24	2/20
Strength	65,000 Single 98,000 Dual 180,000 Dual Tandem	50,000 Single 60,000 Dual 150,000 Dual Tandem
Takeoff Run Available (TORA)	8,420 / 8,420	3,507 / 3,507
Takeoff Distance Available (TODA)	8,420 / 8,420	3,507 / 3,507
Accelerate-stop Distance Available (ASDA)	8,420 / 7,500	3,507 / 3,507
Landing Distance Available (LDA)	7,500 / 7,500	2,691 / 3,201

Source: Federal Aviation Administration (FAA) 5010-1, inspection date 7/21/2015.

Runway 6-24

The primary runway at ERI is aligned in a northeast to southwest direction and measures 8,420 feet long and 150 feet wide. The runway construction has a grooved bituminous asphalt surface and is in good condition. A major rehabilitation and extension of Runway 6-24 was completed 2015, when it was resurfaced and extended to its current length.

Figure 1-3: Airport Diagram



Source: FAA ERI Terminal Procedures, effective date: May 26 – Jun 23, 2016.

Runway 6-24 is equipped with High Intensity Edge Lights (HIRL). These were raised during the extension and improvement project. Approach lighting is a 2,400-Foot Medium Intensity Approach Light System with Runway Alignment Indicator Lights (MALSR) for both runway ends. Both Runway 6 and 24 are equipped with 4-box Precision Approach Path Indicator (PAPI) on the left side of the runway ends. Visual glide slope angles are standard 3.00 degrees. Runway 24 visual glide slope indicator and descent angles are not coincident. Runway 6 has a displaced threshold of 920 feet. The Airport Master Record (FAA 5010-1, inspection date 7/21/2015) notes that the runway has precision markings, but the markings are in poor condition.

Land and hold-short operations (LAHSO) exist on Runway 24 for Runway 2-20. The available landing distance prior to the LAHSO is 6,550 feet.

The standard Runway Safety Area (RSA) width is 500 feet and lengths are 1,000 feet beyond the departure ends and the standard Runway Object Free Area (ROFA) width is 800 feet and lengths are 1,000 feet beyond the departure end. RSA and ROFA are standard for Runway 24. Due to the use of declared distances, the Runway 6 approved RSA and the ROFA end 80 feet beyond the end of pavement and 1,000 feet from the displaced threshold.

Runway 2-20

Runway 2-20 measures 3,508 feet long and 150 feet wide and is constructed of bituminous asphalt pavement in fair condition. This runway serves as the crosswind runway at ERI. The runway is equipped with Medium Intensity Edge Lights (MIRL) and non-precision runway markings in good condition. Runway 20 has as 4-box Visual Approach Slope Indicator (VASI) on the left side of the runway with a non-standard 4.00-degree glide path. Runways 2 and 20 have displaced thresholds of 816 feet and 306 feet, respectively.

The standard RSA width is 150 feet and standard length is 300 feet beyond departure end and the standard ROFA width is 500 feet and standard length is 300 feet beyond departure end. Due to obstructions located at both ends of Runway 2-20, both ends of the runway have displaced thresholds. Due to the use of declared distances, the approved RSA and ROFA at Runway 2 are located 816 feet beyond the displaced threshold at the edge of pavement. The ends of the RSA and ROFA at Runway 20 are located 435 feet beyond the displaced threshold.

1.2.2. Taxiways

ERI has 10 taxiways. Taxiways are designated A through G (including Taxiways A1, A2, and A3) as described below. Taxiways are constructed of bituminous asphalt pavements and have standard pavement markings and edge lighting. Taxiways serving Runway 6-24 have a taxiway safety area width of 118 feet and taxiway object free area width of 186 feet to meet Airplane Design Group (ADG) III standards. Taxiways serving Runway 2-20 have a taxiway safety area width of 79 feet and taxiway object free area width of 131 feet to meet ADG II standards.

Taxiway A is a partial parallel taxiway to Runway 6-24, providing access to the Runway 24 end. Access to Taxiway A is provided by Taxiways C and D from the terminal apron and Fixed Base Operator (FBO) apron. The taxiway width varies from 75 feet to 90 feet between Runway 2-20 and Taxiway A1. The taxiway width from Taxiway A1 to the Runway 24 end is 50 feet. The runway centerline to taxiway centerline distance between Taxiway A and Runway 6-24 from

Runway 2-20 to Taxiway A1 is approximately 370 feet, which does not meet the standard separation distance of 400 feet for Aircraft Approach Category (AAC)-ADG C-III according to FAA Advisory Circular (AC) 150/5300-13A. The 2004 Master Plan prepared by C&S Engineers noted that ERI has an approved Modification to Standards for the non-standard separation distance.

Taxiways A1, A2, and A3 provide access to Runway 6-24 from Taxiway A. The taxiway widths are 90 feet.

Taxiway B is a partial parallel taxiway to Runway 2-20 and provides access from the terminal apron to the Runway 20 end. The taxiway width is 50 feet. The runway centerline to taxiway centerline distance between Taxiway B and Runway 2-20 is approximately 320 feet, which exceeds the standard separation distance of 240 feet for AAC-ADG B-II according to AC 150/5300-13A.

Taxiway C provides access from the terminal apron area to Taxiway A. The taxiway width varies from 75 to 90 feet.

Taxiway D provides access to Runways 2-20 and 6-24 from the terminal and FBO aprons. The taxiway width is 75 feet with 12.5 foot shoulders between the apron and Runway 2-20. The taxiway width is 150 feet between Runway 2-20 and Runway 6-24. This taxiway formerly served as Runway 10-28 prior to 1992.

Taxiway E provides access from the terminal apron to Runway 2-20. The taxiway width is 80 feet.

Taxiway F provides access from the terminal and FBO aprons to Taxiway G and Runway 6. The taxiway width varies from 80 to 90 feet.

Taxiway G is a partial parallel taxiway to Runway 6-24 and provides access to the Runway 6 end. The taxiway width is 90 feet. The runway centerline to taxiway centerline distance between Taxiway G and Runway 6-24 is approximately 350 feet, which does not meet the standard separation distance of 400 feet for AAC-ADG C-III according to AC 150/5300-13A.

1.2.3. Instrumentation, Approach Aids, Instrument Approach Procedures

Navigational aids (NAVAIDs) are any electronic or visual devices, airborne or on the ground, which provide point-to-point guidance information or position data to aircraft in flight. All local traffic is controlled by the ATCT, which is operational between 6:00AM and 12:00AM daily. ERI has several electronic and visual navigational aids that pilots use to locate, navigate to, and land at the Airport, which are discussed below. A summary of instrument approach minima is shown in Table 1-3.

Table 1-3: ERI Instrument Procedures Approach Minima

Runway End	Type of Approach	Approach Minima (Ceiling-Visibility)
Runway 6	ILS	250' Above Ground Level (AGL) – 4,000'
Runway 6	RNAV (GPS) - LPV	250' AGL – 4,000'
Runway 24	ILS	257' AGL – 2,400'
Runway 24	RNAV (GPS) - LPV	257' AGL – 2,400'
Runway 6	NDB Category A, B	628 AGL– 4,000
Runway 6	NDB Category C, D	628 AGL – 1 3/8
Runway 24	NDB Category A, B	596 AGL – 4,000
Runway 24	NDB Category C, D	596 AGL – 6,000

Source: FAA ERI Terminal Procedures, effective date: May 26 – Jun 23, 2016, except NDB RW 6, effective date: Mar 31 – Apr 28, 2016. NDB Runway 6 was removed Procedure effective date: May 26 - Jun 22, 2016.

Instrument Landing System (ILS)

An ILS provides horizontal and vertical guidance to a runway end, which allows pilots to land aircraft when visual navigation is limited. The ILS is used in poor weather with low visibility conditions. ILS procedures for Runways 6 and 24 are included in **Figure 1-4** and **Figure 1-5**.

The electronic components that comprise the ILS are the localizer, glide slope, outer marker, and middle marker. The localizer signal is used to establish and maintain the aircraft's horizontal position until visual contact confirms the runway alignment and location. The glide slope is an electronic transmitter that emits signals used to establish and maintain the aircraft's descent rate until a pilot can visually confirm the runway alignment and location. The outer marker radiates a signal that marks the point at which glide slope altitude is verified or at which descent without glide slope is initiated. The middle marker radiates a signal that marks the decision point of the ILS approach.

Approach lighting systems are used in conjunction with an ILS to assist pilots transitioning from instrument to visual conditions. Runways 6 and 24 are equipped with a MALSR. The Medium Intensity Approach Lighting System (MALS) portion is a series of steady burning light bars that begin at the runway threshold and extend outward 1,400 feet into the runway approach area along the extended runway centerline.

RNAV (GPS) Approaches

Properly equipped aircraft can use Global Positioning Systems (GPS) provided by satellites for approach procedure to ERI. Area Navigation (RNAV) (GPS) procedures for Runway 6 and Runway 24 are included in **Figure 1-6** and **Figure 1-7**.

Non-directional Beacon (NDB)

NDB is a radio transmitter at a known location and is used as location markers for ILS approaches. NDB procedures for Runway 6 and Runway 24 are included in **Figure 1-8** and **Figure 1-9**. NDB locations for approaches to ERI include Esmer NDB for Runway 6 approaches and Cascade NDB for Runway 24 approaches.

Visual Approach Aids

Runway 6-24 is equipped with a 4-box PAPI on the left side of Runways 6 and 24. MALSR are equipped on both ends of Runway 6-24. Runway 2 is equipped with a 4-box VASI on the left side.

Very-High Frequency Omni-Directional Range (VOR)

A VOR system transmits very high frequency (VHF) radio signals to aircraft equipped with receivers, which allows pilots to determine position and course relative to the VOR facility. VOR facilities at ERI have the following limitations.

The VOR portion is unusable between 48 and 66 degrees, between 76 and 154 degrees beyond 30 nautical miles (NM) below 5,000 feet, between 155 and 190 degrees beyond 30 NM, and between 191 and 249 degrees beyond 30 NM below 6,000 feet.

The Distance Measuring Equipment (DME) portion is unusable between 76 and 109 degrees beyond 30 NM below 5,000 feet, between 110 and 180 degrees beyond 25 NM below 5,000 feet, between 181 and 249 degrees beyond 30 NM below 5,000 feet, and between 295 and 315 degrees beyond 35 NM below 3,000 feet.

Automated Surface Observing System (ASOS)

Weather reporting equipment at ERI consists of an ASOS accessible from Taxiway F and located between Taxiways D and F. An ASOS provides continuous minute-by-minute observations and performs basic observing functions necessary to generate an aviation routine weather report (METAR) and other aviation weather information. An ASOS has the capability to report altimeter, wind, temperature/dew point, density altitude, visibility, clouds/ceiling, precipitation, and remarks.

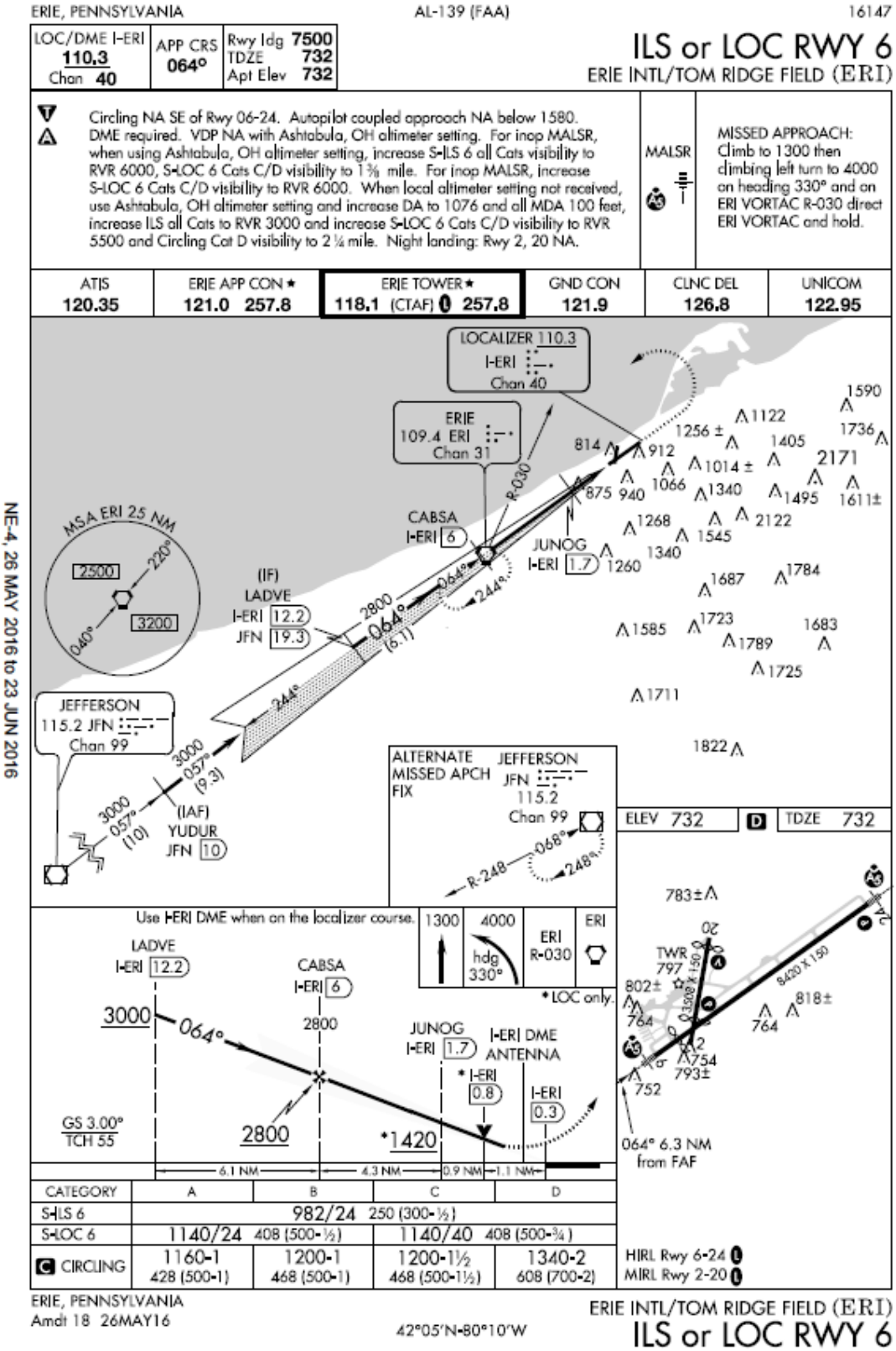
Wind Cones

The primary wind cone is located between Runway 2-20 and Taxiways A and C. Supplemental wind cones are located next to Taxiway G near the Runway 6 end and between Taxiway A1 and the end of Taxiway A at the Runway 24 end.

Airfield Lighting

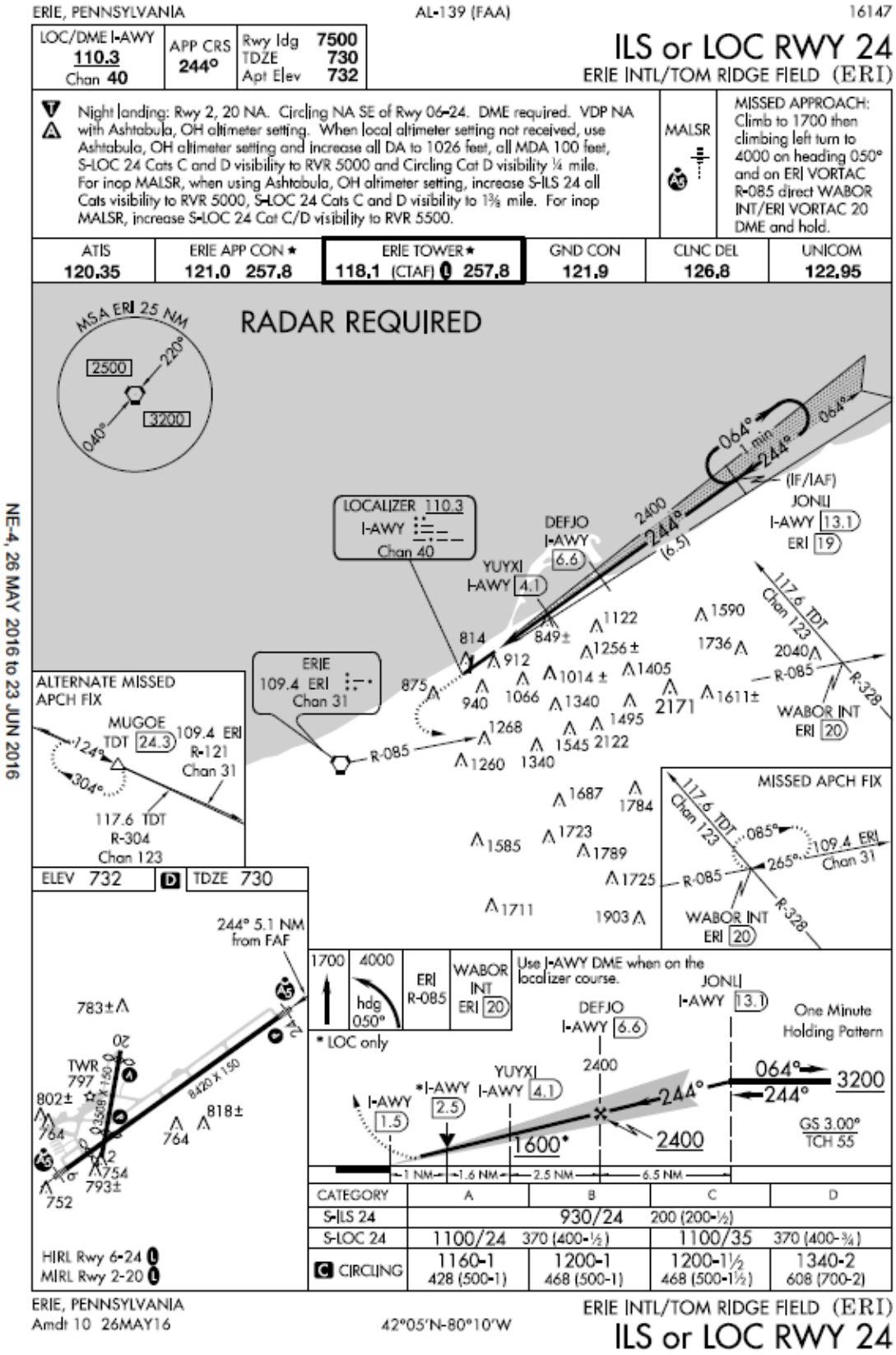
Airfield lighting for runways, taxiways, lighted directional signs, and other signage is powered from an electrical vault located north of Taxiway C. An emergency generator and 400 gallon diesel tank are located adjacent to the vault to provide emergency power.

Figure 1-4: Runway 6 ILS or LOC/DME Procedures



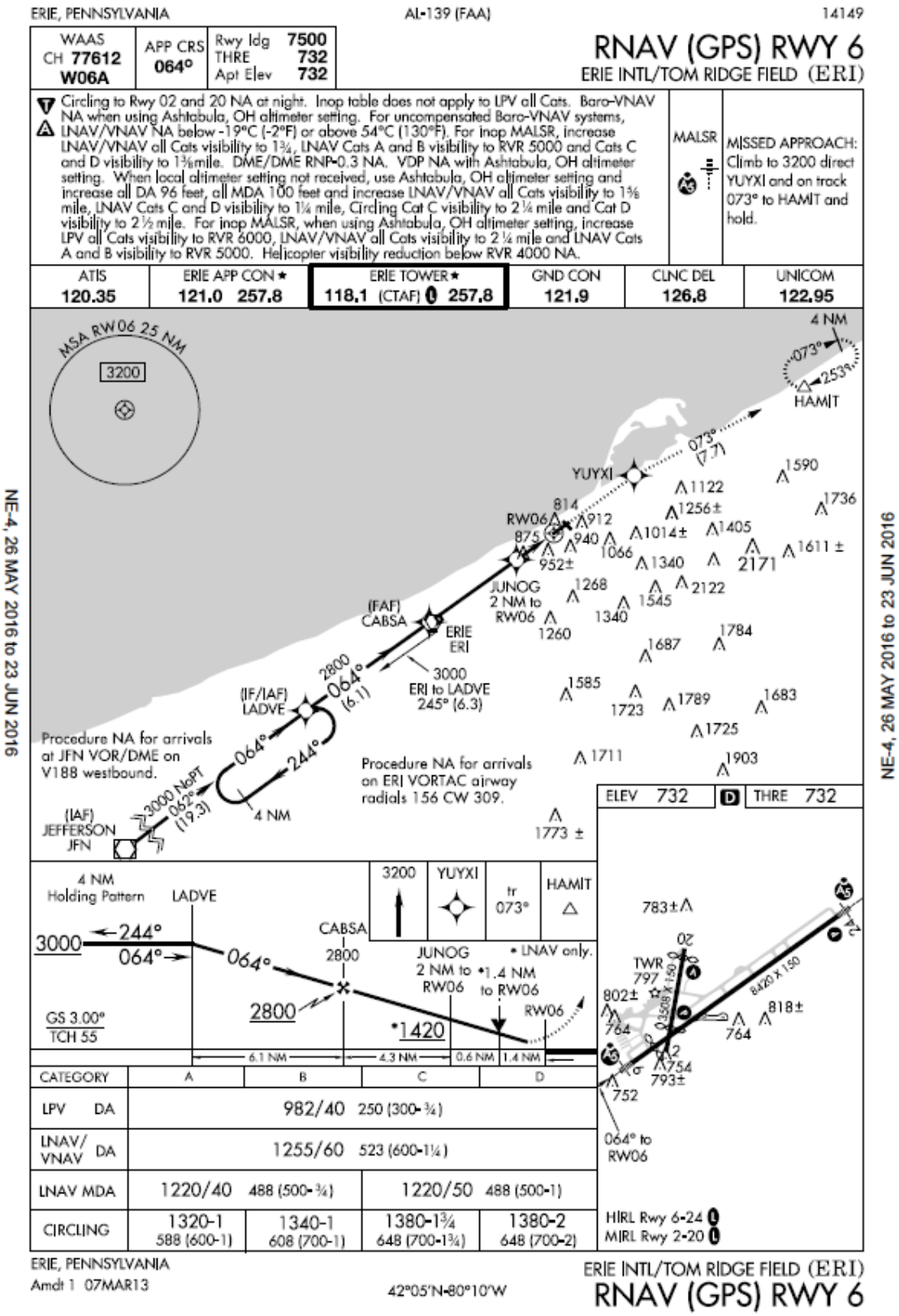
Source: FAA ERI Terminal Procedures, effective date: May 26 – Jun 23, 2016.

Figure 1-5: Runway 24 ILS or LOC/DME Procedures



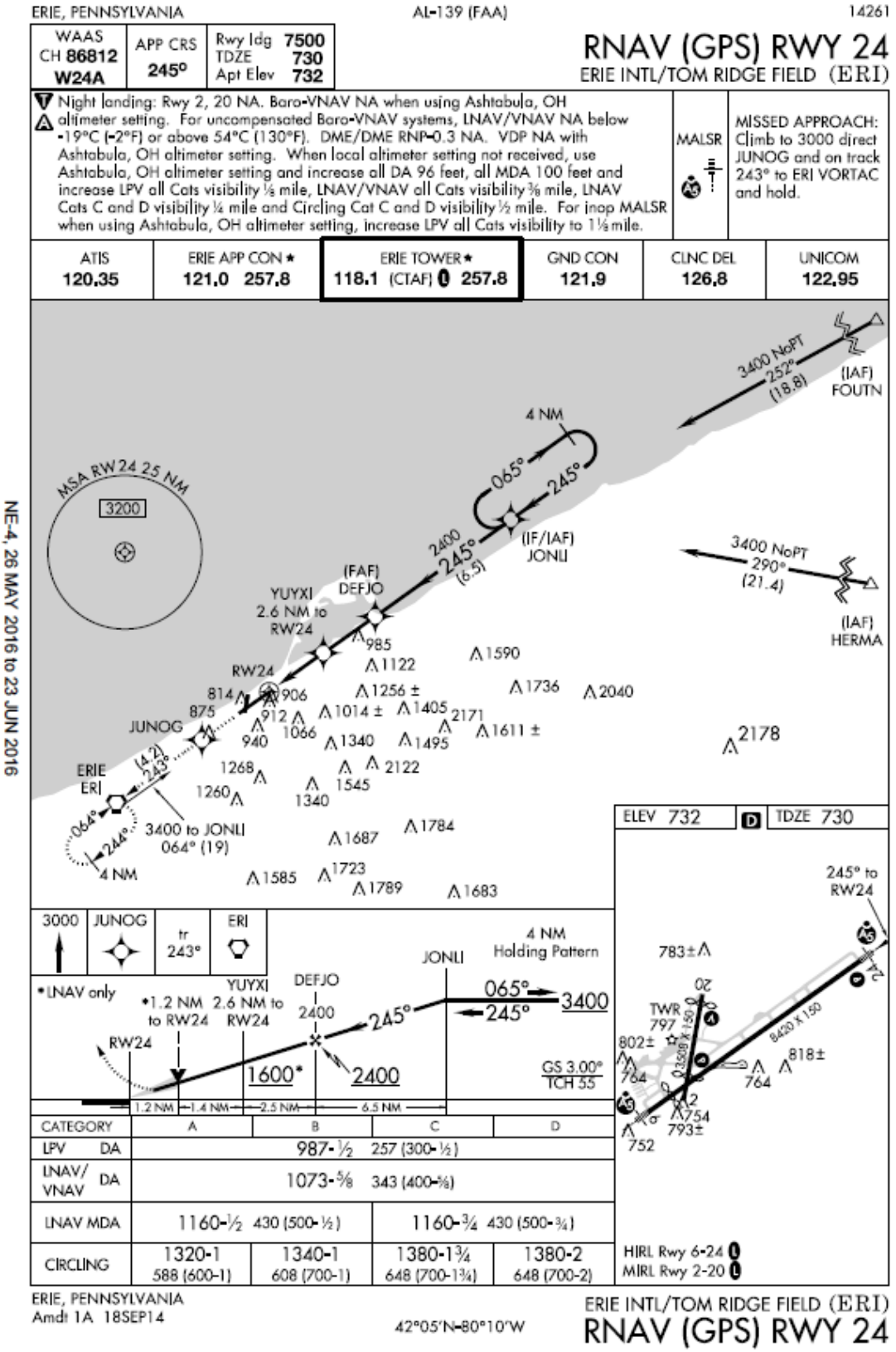
Source: FAA ERI Terminal Procedures, effective date: May 26 – Jun 23, 2016.

Figure 1-6: Runway 6 RNAV (GPS) Procedures



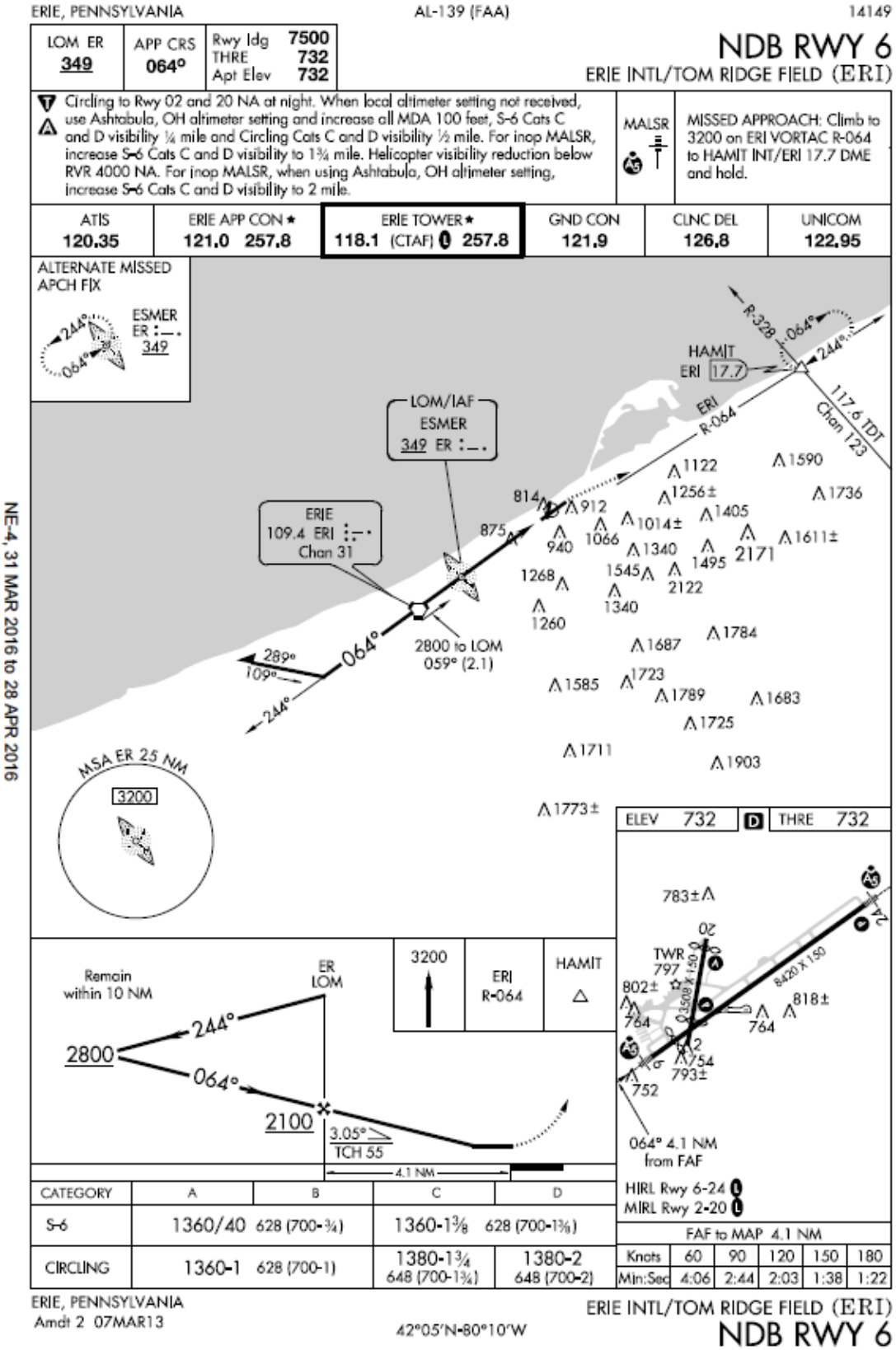
Source: FAA ERI Terminal Procedures, effective date: May 26 – Jun 23, 2016.

Figure 1-7: Runway 24 RNAV (GPS) Procedures



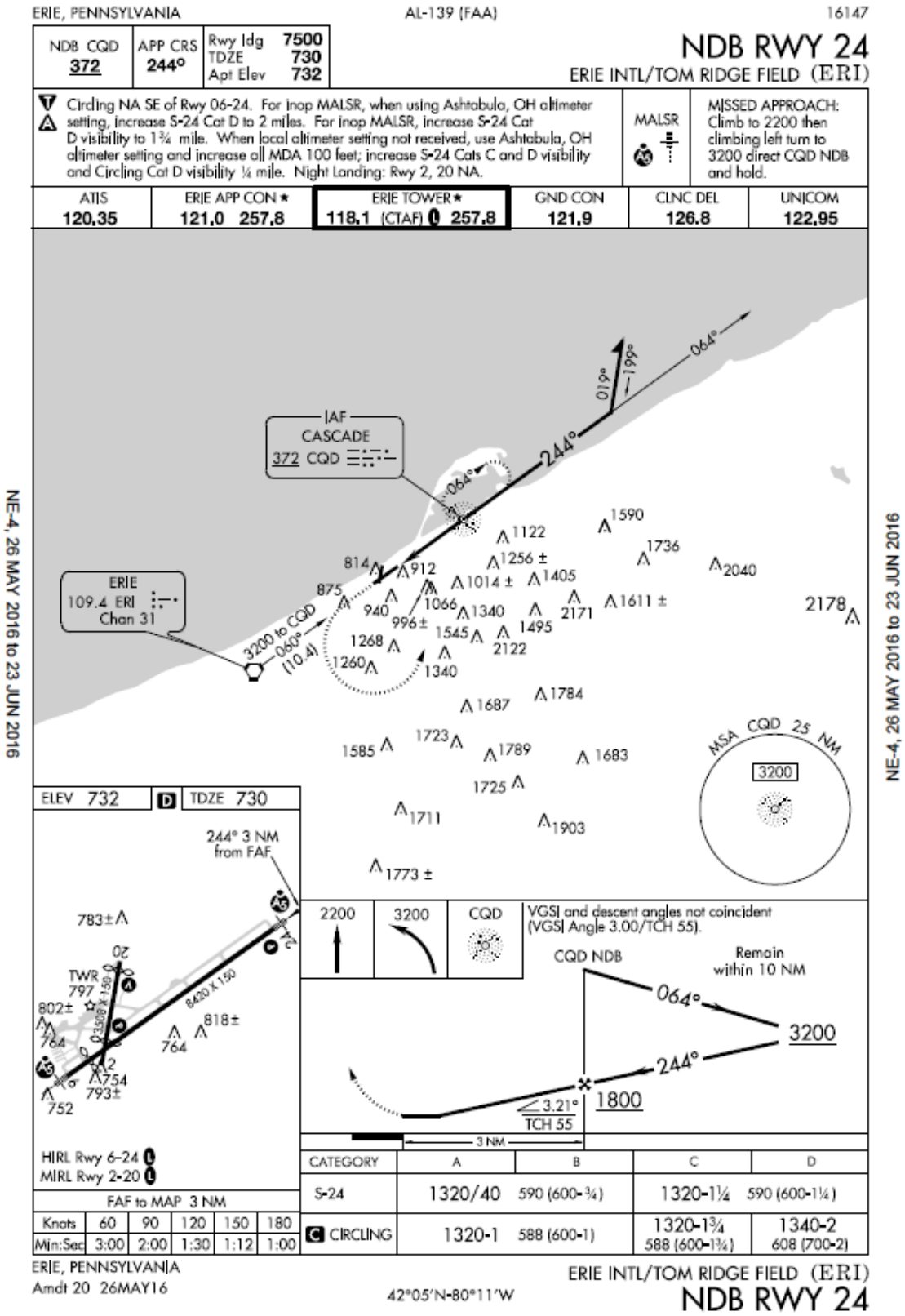
Source: FAA ERI Terminal Procedures, effective date: May 26 – Jun 23, 2016.

Figure 1-8: Runway 6 NDB Procedures



Source: FAA ERI Terminal Procedures, effective date: Mar 31 – Apr 28, 2016.

Figure 1-9: Runway 24 NDB Procedures



Source: FAA ERI Terminal Procedures, effective date: May 26 – Jun 23, 2016.

1.3. AIRSPACE AND AIR TRAFFIC CONTROL

Airspace in the United States is classified as controlled, uncontrolled, or special use. Controlled airspace is a generic term that covers the different classification of airspace (Class A, Class B, Class C, Class D, and Class E) and defined dimensions within which air traffic control (ATC) service is provided to Instrument Flight Rules (IFR) flights and to Visual Flight Rules (VFR) flights in accordance with the airspace classification. Uncontrolled airspace includes areas where ATC has neither authority nor responsibility to control aircraft. According to the Aeronautical Information Manual (AIM), special use airspace consists of airspace where activities must be confined because of their nature or where limitations are imposed upon aircraft operations that are not part of the confined activities. Special use or restricted airspace is depicted on aeronautical charts unless it is the result of a controlled firing area. Special use areas are typically due to military training facilities.

1.3.1. Airspace Structure

Airspace in the United States is designated with the letters A through G (not including F). A summary of each of these types of airspace follows and is shown in **Figure 1-10**.

- **Class A:** All airspace between 18,000 feet MSL and 60,000 feet AGL. Class A airspace contains all high altitude airways (jet routes).

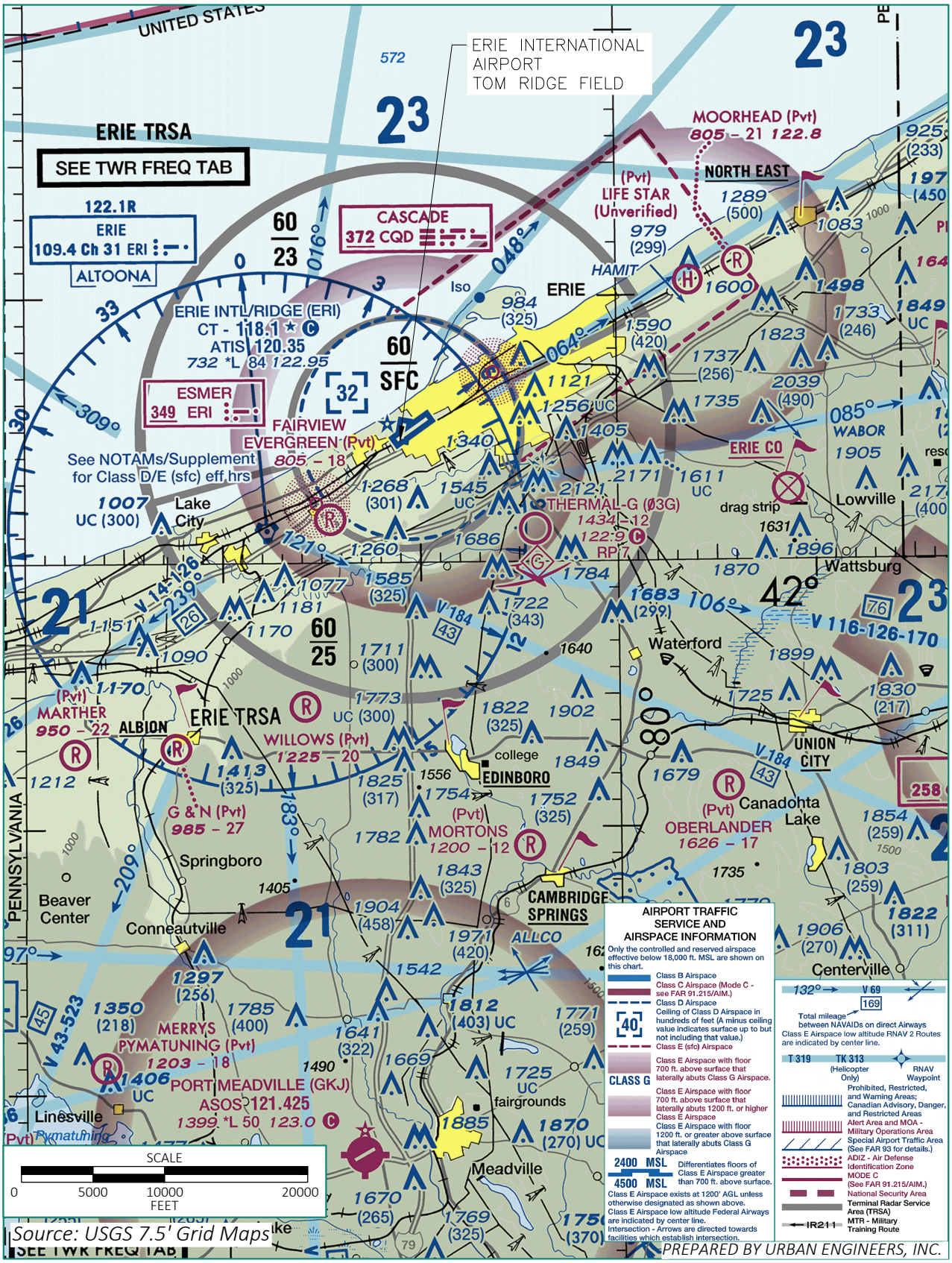
- **Class B:** Airspace from the surface up to 10,000 feet MSL surrounding the nation's busiest airports in terms of IFR operations or passenger enplanements. Each Class B airspace is uniquely tailored to the airport and its vicinity. Class B airspace can resemble an upside-down wedding cake or different tiers with different elevations. ATC clearance is required for aircraft to enter Class B airspace. Cleveland Hopkins International (CLE) and Pittsburgh International (PIT) are the closest airports to ERI surrounded by Class B airspace.

- **Class C:** Airspace from the surface up to 4,000 feet above the airport elevation surrounding airports that have an operational control tower, are serviced by a radar approach control, and that have a certain number of IFR operations or passenger enplanements. Class C airspace is individually tailored, but generally the airspace consists of a 5 NM tier from the surface to 4,000 feet AGL and a 10 NM shelf that extends from 1,200 feet up to 4,000 feet AGL. Buffalo Niagara International (BUF) and Akron–Canton Airport (CAK) are the closest airports to ERI that are surrounded by Class C airspace.

- **Class D:** The terminal area airspace surrounding non-hub commercial airports, such as ERI, with a radius of five statute miles. The airspace extends from the surface to a height of 3,200 feet MSL at ERI.

- **Class E:** General and en-route airspace that includes most of the remaining airspace not designated as A through D. In the Erie region, the Class E airspace begins at the surface within the Runway 24 approach and at 700 feet AGL surrounding the remainder of the Airport and extends upward to the overlying Class A airspace. This airspace contains low altitude airways often called Victor Airways.

Figure 1-10: ERI Surrounding Airspace



Source: USGS 7.5' Grid Maps

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- **Class G:** Uncontrolled airspace that exists between the ground and 700 feet AGL, beyond the limits of the Erie Class D area, except within the Runway 24 approach.

- **Special Use Airspace:** There are no special use areas adjacent to ERI. The closest designated special use area is Duke Military Operations Area (MOA) located over 100 NM to the southeast, which covers portions of north central Pennsylvania and southern tier New York state.

- **En-Route Airspace:** Aircraft flying inbound to or outbound from ERI typically follow designated routes between ground based NAVAIDs. The primary en route NAVAID in this region is the Erie VOR.

  These designated routes or airways have alphanumeric identifiers beginning with the letter V and are thus called Victor Airways. Several Victor Airways cross the ERI VOR, including V14-126, V37, V43, V43-523, V116, V116-126-170, V184, V221, V270, and V522.

1.3.2. Air Traffic Control

The ATCT at ERI is located on the fourth floor of the terminal building. Additional ATC offices are located on the third floor of the terminal building. The ERI ATCT is operational from 6:00AM until Midnight local time. ERI has an FAA Terminal Radar Approach Control facility (TRACON). ERI handles traffic below 10,000 feet MSL and the Cleveland Air Route Traffic Control Center (ARTCC) controls above 11,000 feet MSL.

ERI has a designated Terminal Radar Service Area (TRSA) centered on the airport where radar service and control is available to aircraft. A TRSA is a specified size and shape of airspace designed to provide traffic separation between participating VFR aircraft and all IFR aircraft.

The ERI TRSA includes an inner circle (five mile radius) surface up to 6,000 feet MSL. The TRSA's Outer Circle (10 mile radius) is 2,300 to 6,000 feet MSL in areas over Lake Erie and near the shoreline, and 2,500 to 6,000 feet MSL in areas to the south of the shoreline. The TRSA terminates at 6,000 feet MSL.

1.3.3. Airspace Conflicts

The FAA has established planning specifications for evaluating potential airspace conflicts and to ensure safe and efficient aircraft operations. These guidelines are presented in FAA Order 7480-1A, *Guidelines for Airport Spacing and Traffic Patterns*.

1.3.4. Obstructions

The following published obstructions are within the runway approach surfaces.

Runway 6 obstructions:

- 31-foot lit railroad, 202 feet from runway, 360 feet right of centerline;
- 46 feet railroad signal, 100 feet from approach end of runway (AER), 490 feet right;

- 15-foot obstruction marked building, 150 feet from AER, 462 feet left; and
- 21-foot obstruction lighted pole at AER, 360 feet right.

Runway 24 obstructions:

- 85-foot trees, 3,012 feet from runway, 661 feet right of centerline, 32:1 slope to clear and
- 6-foot fence, 250 feet left of runway end.

Runway 2 obstructions:

- 36-foot trees, 202 feet from runway, 100 feet right of centerline;
- 31-foot railroad, 0-125 feet from runway end on both sides of centerline; and
- 43-foot trees, 174 feet from runway end, 117 feet right.

Runway 20 obstructions:

- 17-foot road, 200 feet from runway;
- 15-foot road at AER, 225 feet right; and
- 9-foot fence, 65 feet from runway end, 128 feet right.

1.4. LANDSIDE FACILITIES

1.4.1. Airport Buildings

The existing conditions at ERI are depicted in **Figure 1-11** and **Figure 1-12**, and show the general location of buildings, hangars, and other airport and tenant facilities.

Terminal Building

The passenger terminal building is located on the north side of Airport property along W. 12th Street (State Route 5). Two entrances provide access to the terminal from W. 12th Street, the main entrance at a traffic signal at Grace Street and a western entrance located approximately 1,450 feet west of the main entrance and 1,200 feet east of Asbury Road.

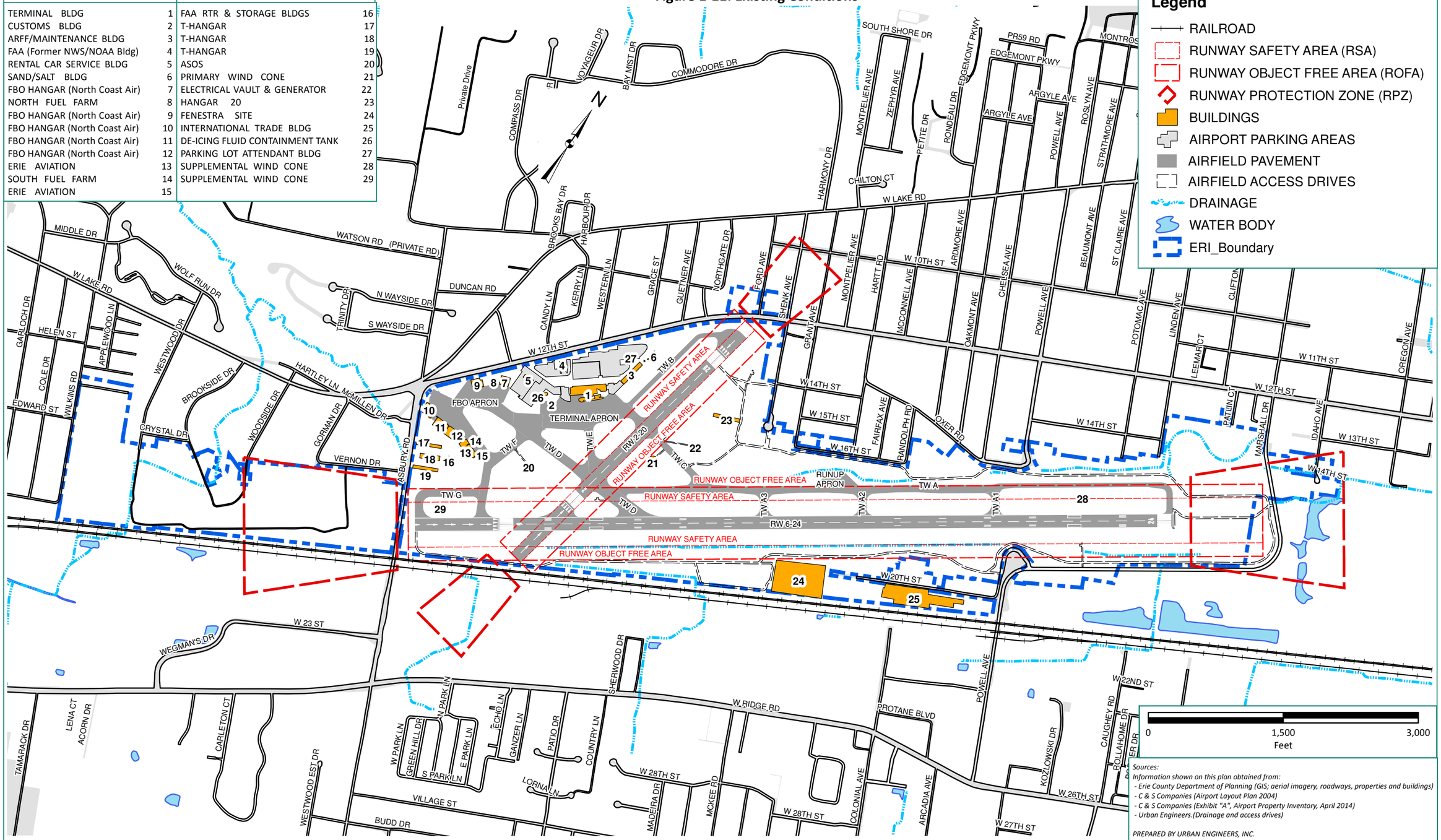
The terminal building was opened in 1958 and has had several expansions and upgrades since its construction. The 1970s saw expansions to baggage claim facilities and later an office expansion for FAA office facilities on the second floor. A ticketing area on the western end of the terminal building was added in 1990. Upgrades to the lobby area and boarding gates and passenger boarding bridges followed in the late 1990s and early 2000s.

The first floor of the passenger terminal building occupies approximately 43,200 square feet and is generally in fair condition, although some of the building features and facilities are outdated and require short-term improvements to maintain a functioning terminal. Airline ticketing counters and Transportation Security Administration (TSA) baggage check and screening facilities are located at the west end of the terminal building. The central terminal area includes the Airport information desk, a public waiting area, vending machines, ATM, business center, luggage carts, car rental counters, restaurant, gift shop, and access to TSA security checkpoint and passenger screening area. The airport public safety office is located adjacent to the entrance

Figure 1-11: Existing Conditions

BLDG NAME	BLDG #
TERMINAL BLDG	1
CUSTOMS BLDG	2
ARFF/MAINTENANCE BLDG	3
FAA (Former NWS/NOAA Bldg)	4
RENTAL CAR SERVICE BLDG	5
SAND/SALT BLDG	6
FBO HANGAR (North Coast Air)	7
NORTH FUEL FARM	8
FBO HANGAR (North Coast Air)	9
FBO HANGAR (North Coast Air)	10
FBO HANGAR (North Coast Air)	11
FBO HANGAR (North Coast Air)	12
ERIE AVIATION	13
SOUTH FUEL FARM	14
ERIE AVIATION	15

BLDG NAME	BLDG #
FAA RTR & STORAGE BLDGS	16
T-HANGAR	17
T-HANGAR	18
T-HANGAR	19
ASOS	20
PRIMARY WIND CONE	21
ELECTRICAL VAULT & GENERATOR	22
HANGAR 20	23
FENESTRA SITE	24
INTERNATIONAL TRADE BLDG	25
DE-ICING FLUID CONTAINMENT TANK	26
PARKING LOT ATTENDANT BLDG	27
SUPPLEMENTAL WIND CONE	28
SUPPLEMENTAL WIND CONE	29



Legend

- RAILROAD
- RUNWAY SAFETY AREA (RSA)
- RUNWAY OBJECT FREE AREA (ROFA)
- RUNWAY PROTECTION ZONE (RPZ)
- BUILDINGS
- AIRPORT PARKING AREAS
- AIRFIELD PAVEMENT
- AIRFIELD ACCESS DRIVES
- DRAINAGE
- WATER BODY
- ERI_Boundary

Sources:
Information shown on this plan obtained from:
- Erie County Department of Planning (GIS; aerial imagery, roadways, properties and buildings)
- C & S Companies (Airport Layout Plan 2004)
- C & S Companies (Exhibit "A", Airport Property Inventory, April 2014)
- Urban Engineers.(Drainage and access drives)

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Figure 1-12: Landside Facilities

Sources:
Information shown on this plan obtained from:
- Erie County Department of Planning (GIS; aerial imagery, roadways, properties and buildings)
- C & S Companies (Airport Layout Plan 2004)
- Urban Engineers.(Drainage and access drives)

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to the security checkpoint. Restroom facilities and the baggage claim area occupy the east end of the terminal building.

Airline gates and passenger waiting areas are located beyond the TSA security checkpoint. Additional restroom facilities are located in the secure waiting area. The Airport has seven departure gates; Gates 1, 5, and 7 are served by passenger boarding bridges.

TSA modular office space is located near the northeast corner of the terminal building and is connected to the terminal building near the air carrier gates. The modular space contains locker rooms, restrooms, and offices.

Located near the TSA modular office are the terminal building's emergency generator, 575 gallon above-ground diesel fuel tank, a 1,500-gallon fuel oil above-ground tank, and the FAA emergency generator.

ERAA and FAA offices, conference rooms, and kitchen facilities are located on the 2nd floor of the terminal building. The second floor is accessible via a secured elevator and stairs near the lobby and information desk. FAA has additional office space on the 3rd floor and the ATCT is on the 4th floor.

The terminal's basement level houses utility equipment, office, and storage space. A portion of the building footprint in the basement is unexcavated. Additional information about the basement is provided in Section 1.5-Airport Terminal Inventory.

Aircraft Rescue and Firefighting (ARFF)/Maintenance Building

Erie's ARFF and maintenance staff share a combined facility located east of the terminal building. The facility covers approximately 13,400 square feet. The original Airport maintenance building was completed in 1960 and additional ARFF vehicle bays and maintenance equipment storage bays were constructed in 1988. The building houses ARFF vehicles, control room/office, restroom, locker room, vehicle maintenance bays, and storage facilities. Maintenance area floor drains were connected to an oil water separator and municipal sanitary sewer in 2012.

Additionally, several sheds and storage tanks are located near the northeast corner of the ARFF/maintenance building. The above-ground storage tanks contain runway de-icing fluids (potassium acetate).

Additional information about the ARFF/maintenance facilities is provided in Section 1.6-Support Facilities.

Sand/Salt Storage Building

The Airport's 3,750 square foot sand and salt storage building was completed in 2011. Located east of the ARFF/maintenance building, the sand/salt storage building is equipped with gas fired infrared tube heaters.

U.S. Customs Building

The United States Customs and Border Protection (CBP) office was constructed in 1991 and spans 2,400 square feet. The building contains office space, inspection area, storage, and break, and restroom facilities.

The building is located near the de-icing fluid collection system tank and houses the flow meter and controls, which are maintained and operated by ERAA staff.

De-icing Fluid Collection System

The Airport and its tenants conduct de-icing during winter months to ensure safe and efficient aircraft operations. The quantity of de-icing fluid varies from year-to-year depending on the weather.

The Airport does not recycle spent de-icing fluid. To divert spent aircraft de-icing fluid away from nearby waterways, the Airport has a de-icing fluid containment system, which was constructed in 1997 and is located west of the terminal building adjacent to the concrete terminal apron. The terminal apron catch basins are connected to a gate vault capable of diverting runoff to either the storm sewer system or the de-icing fluid collection system. Prior to aircraft de-icing activities at ERI, valves within the gate vault are positioned to prevent de-icing fluids from entering the storm sewer system. Runoff from the de-icing activity is diverted to the collection system where it is then pumped to a 133,000-gallon holding tank. Once the de-icing fluids are collected in the holding tank they are discharged at a maximum rate of 20 gallons per minute to the Millcreek Sanitary Sewer System, and ultimately to the Erie Wastewater Treatment Plant. Discharges are conducted within the Guidelines of the Airport's Significant Industrial User Sewer Use Permit (Permit No. NCU016). Chapter 3 of this Master Plan provides additional water quality management practice details.

International Trade Center - Former Penn-Brass Building

The former Penn-Brass building, located at 3837 West 20th Street, was purchased by the ERAA on April 10, 2000. The building now serves as the Airport's International Trade Center. Portions of the building are currently leased as offices and warehousing space to a variety of tenants. The building is of masonry and metal construction and generally in fair condition.

The ERI Foreign Trade Zone (FTZ) warehousing and distribution facility is operated by Logistics Plus at this site. The Erie-Western Pennsylvania Port Authority is the Grantee of FTZ No. 247.

Fenestra Building Site

The Fenestra building was purchased by ERAA in May of 2000. The site is currently vacant and contains only the concrete building pad which has a footprint of approximately 177,000 square feet.

1.4.2. Aprons

Terminal Apron

The terminal apron is constructed of Portland Cement Concrete (PCC) slabs with depths varying between 10 and 14 inches. Total apron area is approximately 31,000 square yards and is generally in fair condition.

The terminal apron provides access to air carrier gates and passenger boarding bridges. Passenger boarding bridges are used at Gates 1, 5, and 7. No passenger boarding bridges are available on Gates 2, 3, 4, and 6 where secure doorway access to the terminal apron and aircraft is provided.

The terminal apron drainage system is connected to a gate chamber that directs stormwater runoff to the storm drain system or to a de-icing fluid containment tank when aircraft de-icing operations occur during winter weather.

FBO Apron

The FBO apron is constructed of asphalt pavement and has a total apron area of approximately 35,500 square yards. The FBO apron has access to Runways 2-20 and 6-24 via Taxiways D, F, and G. Aircraft tie-down locations are provided on the apron with space available for six to eight aircraft. Tie-downs are not used during winter months due to interference with snow plowing operations.

1.4.3. Air Cargo

ERI does not currently have a self-standing air cargo apron or building. Cargo is transported via air carrier operations and FedEx flights. FedEx has a daily flight arriving from Cleveland and uses the FBO apron to transfer to delivery trucks. North Coast Air provides fuel, deicing, and hangar services to FedEx.

1.4.4. Tenants

Federal Aviation Administration (FAA)

The FAA leases 4,750 square feet of office space on the second and third floors of the terminal building. The ATCT is located above the offices.

Other FAA facilities include storage sheds, trailers, and Remote Transmitter/Receiver (RTR) transmitter towers located east of the T-hangars. The FAA also leases operations office space in the former National Weather Service (NWS) building as described below.

National Weather Service – National Oceanic and Atmospheric Administration Building

The former NWS – National Oceanic and Atmospheric Administration (NOAA) building is located northwest of the terminal building near the west entrance of the Airport. The NWS-NOAA building spans approximately 2,875 square feet. ERI leases the site to the FAA for operations

office space, and the building currently houses eight staff members with room for nine total staff.

North Coast Air

North Coast Air is the FBO at Erie International. North Coast Air has office space and operates several hangars on the west end of the Airport adjacent to West 12th Street and Asbury Road.

North Coast Air offers services including aviation fuel services, guided parking, ramp-side transportation, heated hangar space, overnight hangar space, ground power units, lavatory service, aircraft detailing, tie downs, airliner charter ground handling, de-icing, and aircraft maintenance.

Two hangars, office space, and fuel tanks are located on West 12th Street with a leased area totaling 82,500 square feet. North Coast also has office and hangar space located on Asbury Road with a total leased area of 132,386 square feet.

Additionally, North Coast Air leases the northern two T-hangars with areas totaling 57,000 square feet. A summary of North Coast Air facilities is shown in Table 1-4.

North Coast Air has three trucks for de-icing/anti-icing services, two trucks with a 1,000-gallon capacity and one with a 1,500 gallon capacity. Trucks are equipped with Type I and Type IV fluids (propylene glycol). North Coast Air has a 10,000 gallon holding tank, which is used to refill de-icing trucks, located at the south fuel farm.

Table 1-4: North Coast Air (NCA) Facilities Summary

Description	Building Area (Square Feet)
FBO-Offices/Hangar	13,600
FBO-Conventional Hangar	16,700
FBO-Conventional Hangar	16,700
T-Hangar	9,100
T-Hangar	11,500
FBO-Conventional Hangar	11,875
FBO-Conventional Hangar	10,000
North Fuel Farm	2,500
South Fuel Farm	3,000

Source: Airport Layout Plan (Dated June 2004, C&S Companies) and North Coast Air.

North Coast Flight School

North Coast Flight School is a Part 141 flight training facility that operates at Hangar 5 of North Coast Air facilities at 1605 Asbury Road. The flight school currently has a staff of five FAA CFI (certified flight instructor) and CFII (certified flight instrument instructors) and plans to add two additional instructors. North Coast Flight School is a founding member of FSANA (Flight School Association of North America).

North Coast UAS (Unmanned Aviation System) is associated with North Coast Flight School and offers drone sales, service, and training.

Erie Aviation

Erie Aviation offers repair, maintenance, and distribution of avionics equipment. Erie Aviation operates two conventional hangars located on the west end of the Airport, accessible from Asbury Road at the Kudlak Drive entrance gate. The hangars total 17,800 square feet and were designated buildings 11 and 12 on the 2004 Airport Layout Plan.

T-Hangars

There are three T-hangars located north of the Runway 6 end of Runway 6-24 at the west end of the Airport property. North Coast Air occupies the northern two hangars and the third hangar is leased to Aviation Flyers, Inc. The approximate areas of the hangar buildings from north to south are 9,100 square feet with nine hangar units, 11,500 square feet with 10 units, and 9,100 square feet with nine units. The aprons around the T-Hangars are asphalt pavement in fair to poor conditions with several areas of cracking noted.

Hangar 20

Hangar 20 is a T-hangar leased to Hangar 20, LLC. The hangar is approximately 10,500 square feet with nine units and is located east of Runway 2-20 and north of Taxiways A and C. Vehicle access to the hangar is available through Gate 7 at Schenk Avenue. Aircraft access to the airfield is from soft surface and apron onto Taxiway C.

Rental Car Service Building

The rental car service building was constructed in 2001 and is generally in good condition. Located on the right side of the Airport's west entrance, the building area is approximately 4,600 square feet and has four service bays for the rental car vendors, with one bay each assigned to Enterprise, Hertz, Avis/Budget, and Alamo/National.

Rental car storage lots are located adjacent to the building and additional overflow parking for rental vehicles is located at the former NWS building. The rental car ready lot is located between the east end of the terminal building, the ARFF/maintenance building, and in short term parking. Rental car return is located along the north side of the entrance road median.

Other

Automated Industrial Systems leases approximately 8,350 square feet of the western side of an ERAA parcel located at the northwest corner of W. 12th Street and Ford Avenue. The lease area is used for vehicle parking.

Smith Collision, Inc. leases a portion of ERAA property located on W. 20th Street near their shop at 3844 W. 20th Street.

ERAA also owns property with gas wells, which are leased to Stedman Energy. The first well is located west of Asbury Road, south of Vernon Drive. The second well is located on the north side of West 12th Street, west of Ford Avenue.

1.5. AIRPORT TERMINAL INVENTORY

As previously discussed, the terminal building was opened in 1958 and has had several expansions and upgrades since its construction including expansions to baggage claim facilities, office expansions, ticketing area, lobby upgrades, and upgrades to boarding gates and passenger boarding bridges.

The first floor of the passenger terminal building occupies approximately 43,200 square feet and is generally in fair condition. The terminal building can be divided into public/pre-security checkpoint and secure/post-checkpoint areas. The Terminal's first floor plan is shown in **Figure 1-13**.

Pre-security areas are summarized in **Table 1-5** and include common public waiting area; baggage claim and baggage loading areas; air carrier ticketing, operations, storage, and queuing; rental car counters and offices; café and gift shop; restroom facilities; TSA and police areas; and miscellaneous ERAA space.

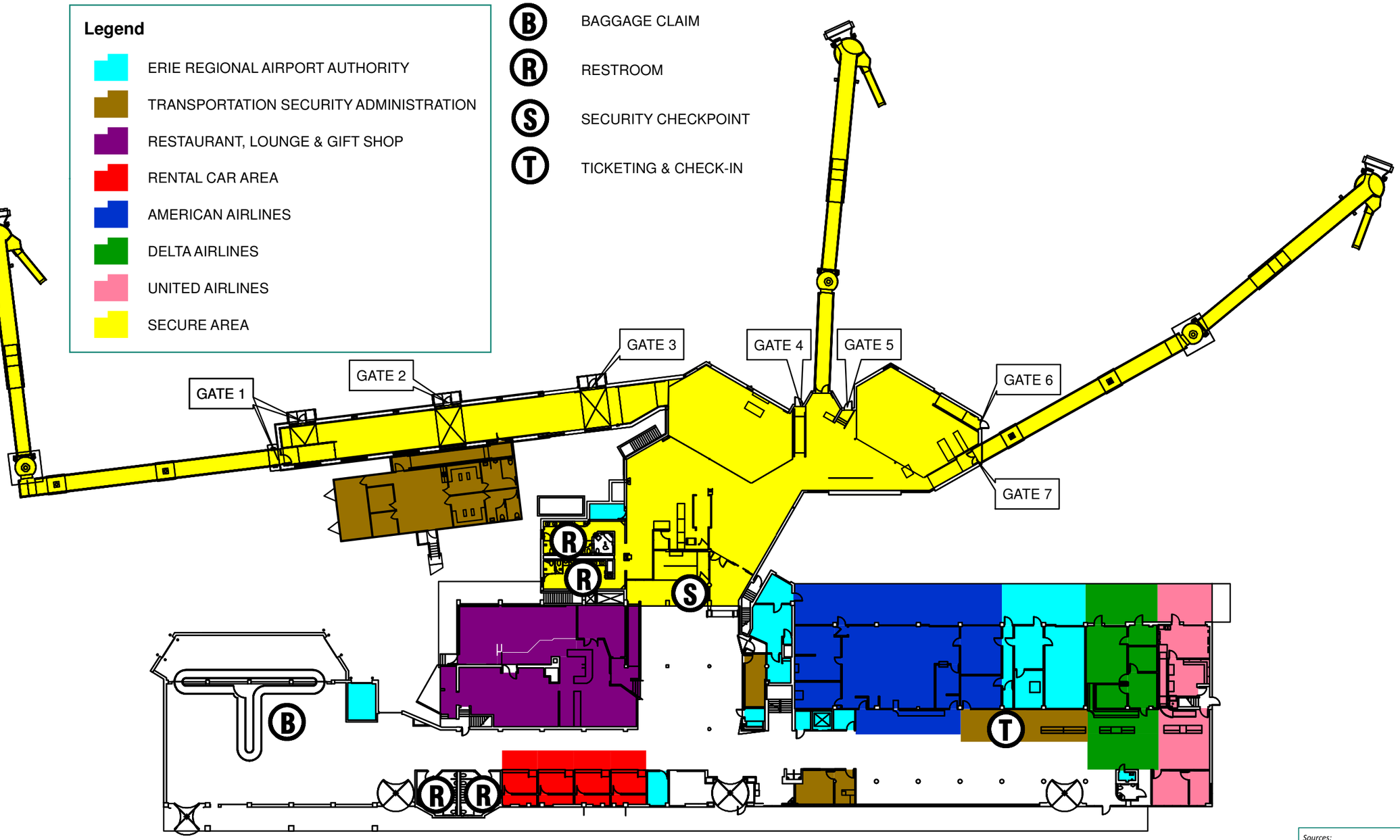
Post-security checkpoint areas are summarized in **Table 1-6** and include TSA security checkpoint/screening area; secure/restricted common waiting area (includes Gates 2-4, and 6); secure/restricted area restrooms; miscellaneous ERAA; TSA offices; and three passenger boarding bridges.

Table 1-5: Terminal Building Space-Pre-Security Checkpoint

Area Description/Use	Area (Square feet)
Common Public Waiting Area	4,928
Common Baggage Claim and Restricted Loading Area	4,706
Air Carrier Ticketing, Operations, Storage, and Queuing	8,143
Rental Car Counters and Office Space	1,102
ERI Café & Gift Shop	2,909
Restroom Facilities (Men's, Women's, Ticketing)	502
TSA Misc + Police	438
ERAA Misc	2,523

Source: Urban Engineers, Inc. field survey.

Figure 1-13: Terminal First Floor Plan



TERMINAL - FIRST FLOOR

Sources:
Information shown on this plan obtained from:
- Urban Engineers field survey.

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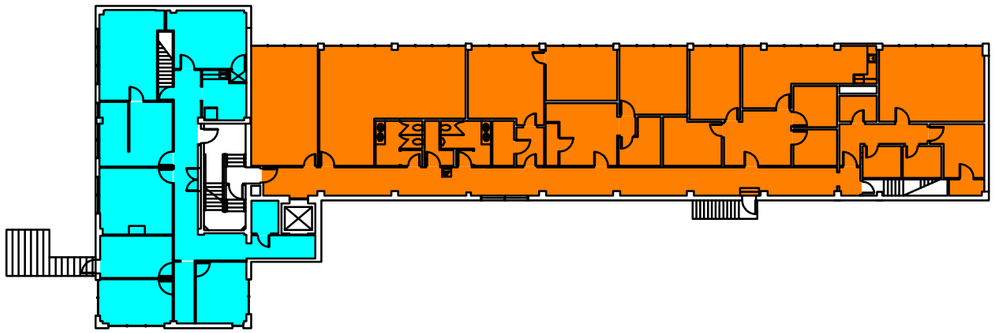
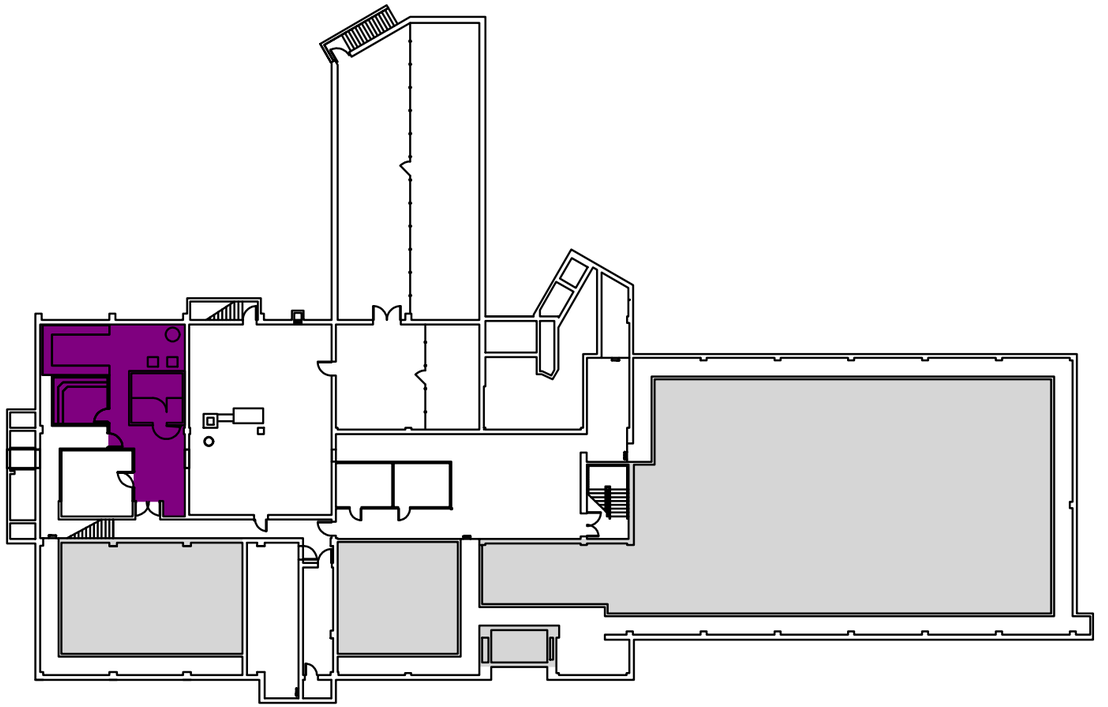
Figure 1-14: Terminal Second Floor and Basement Plans

LEGEND

- FEDERAL AVAITION ADMINISTRATION
- ERIE REGIONAL AIRPORT AUTHORITY
- RESTAURANT STORAGE
- UNEXCAVATED AREA



TERMINAL - SECOND FLOOR



TERMINAL - BASEMENT

Sources:
Information shown on this plan obtained from:
- Urban Engineers field survey.

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Table 1-6: Terminal Building Space-Secure/Restricted Space

Area Description/Use	Area (Square feet)
TSA Security Checkpoint/Screening Area	518
Secure/Restricted Common Waiting Area (includes Gates 2-4, and 6)	9,341
Secure/Restricted Area Men's Restroom	300
Secure/Restricted Area Women's Restroom	300
ERAA Misc.	82
TSA Offices (Modular Office Space)	1,860
Gate 1 Passenger Boarding Bridge (East)	1,222
Gate 5 - Passenger Boarding Bridge (Middle)	827
Gate 7 - Passenger Boarding Bridge (West)	1,160

Source: Urban Engineers, Inc. field survey.

1.5.1. Passenger Terminal

Air Carrier Airlines and Ticketing Areas

There are three air carriers based at ERI: American Airlines, Delta Air Lines, and United Airlines. Airlines' space allocation within the terminal building is based upon current lease agreements and includes ticketing counters, operations/office space, and baggage/storage areas. Per the lease agreements, all airlines share a common queuing area. The TSA baggage screening area is located between the American Airlines and Delta Air Lines ticketing counters.

Restaurant and Concessions

The Airport has a restaurant, the ERI Café, which is located near the public waiting area on the non-secure side of the TSA security checkpoint. The restaurant is open daily at 4:00AM and offers a variety of breakfast and lunch options. ERI Café also has a souvenir and gift shop.

Public Space and Baggage Claim

The terminal's public waiting area is centrally located outside the TSA security checkpoint. The Airport information desk is located near the waiting area.

Passengers arriving in Erie pass through the public waiting area after exiting the secure gate area and will pass the rental car counters and restroom as they move to the baggage claim area. The baggage claim area is located on the east end of the terminal and contains over 3,500 square feet. A secure baggage loading area, accessible from the terminal apron, is located behind the claim area.

Security Checkpoint and Gates

Airline ticketing and TSA checked baggage screening is located on the west end of the terminal building near the airline ticketing counters. After ticketing, check in, and baggage screening, airline passengers may proceed to the public waiting area and the security check point. The TSA

security checkpoint is centrally located in the terminal building and includes passenger screening and carry-on baggage screening by TSA.

TSA offices are located in a modular office space connected to the gate area near Gates 2 and 3.

Airline gates and passenger waiting areas are located beyond the TSA security checkpoint. Vending machines and additional restroom facilities are located in the secure waiting area. The Airport has seven departure gates; Gates 1, 5, and 7 are served by passenger boarding bridges.

Commercial Airlines Operations and Gates

As previously noted, there are three air carriers based at ERI: American Airlines, Delta Air Lines, and United Airlines. There are seven gates in the ERI terminal. Three gates have passenger boarding bridge access to arriving and departing aircraft, while the remaining gates are served by access to the apron.

United Airlines (United) generally uses Gate 1, which is served by a passenger boarding bridge. Gates 2 and 3 are also available, as needed, depending on aircraft types and flights. The United gates are located on the east end of the terminal. United service to ERI is generally on Embraer 135 and 145 aircraft.

Delta Air Lines (Delta) uses Gates 4 and 5 and has passenger boarding bridge access on Gate 5. Delta's gates are centrally located in the terminal after passing through the security checkpoint. Delta service to ERI is generally on Embraer ERJ 145 and Bombardier CRJ 200 aircraft.

American Airlines (American) uses Gates 6 and 7. American's gates are located on the west end of the terminal. Gate 6 is currently used with Bombardier Dash 8 aircraft. Gate 7 has a passenger boarding bridge and will be used for Embraer 145 service, which is expected to begin in June 2016.

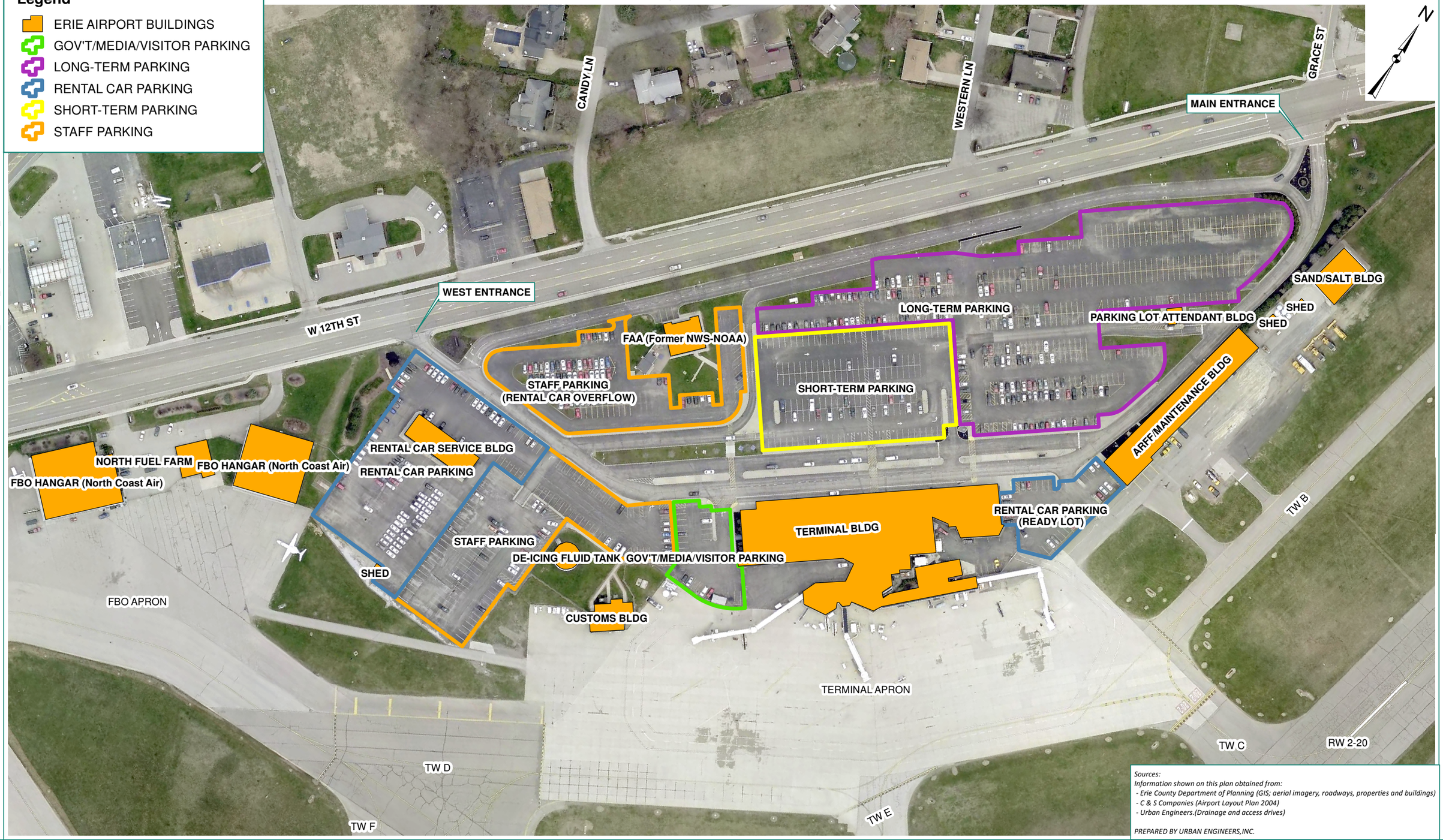
Commercial Aircraft Fueling and De-icing

The FBO, North Coast Air, provides fueling services to the commercial air carriers at ERI. De-icing services are provided by North Coast Air to Delta and United. American has two of its own de-icing trucks and a 6,000-gallon tank located near the terminal apron and the CBP Building.

ERAA and FAA Offices

ERAA and FAA have offices on the terminal's second floor, which is accessible by elevator and stairs, both of which are secure and not open to public access. The second floor layout is shown on **Figure 1-14**. The ERAA has administrative offices which occupy over 1,900 square feet. The FAA occupies over 4,700 square feet of space on the second floor for offices. The space is secure and separate from the ERAA offices and contains offices, conference rooms, TRACON rooms, break rooms, and restrooms. The third floor of the terminal building has FAA equipment, break rooms, and restrooms. The ATCT is located on the fourth floor of the terminal building.

Figure 1-15: Terminal Area



Sources:
Information shown on this plan obtained from:
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- Urban Engineers.(Drainage and access drives)

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Terminal Basement Level

The terminal building basement contains electrical, mechanical, and utility equipment, a security room, maintenance staff office/break room, and documents/miscellaneous storage space. The ERI Café has storage, a refrigerator, and a freezer located in the basement area beneath the café. A large portion of the building footprint is unexcavated basement and pipe trench areas for various utilities. The basement level layout is shown on Figure 1-14.

1.5.2. Automobile Parking Facilities

ERI parking facilities include short- and long-term lots, rental lots, and additional lots for ERAA staff and other tenants' staff. The short- and long-term parking areas are operated by Republic Parking. The terminal area and parking locations are shown in Figure 1-15. A summary of parking lots and spaces is found in Table 1-7.

Short-term Parking

Short-term parking facilities are located across the entrance road from the terminal building. A painted cross walk provides access to/from the terminal across the entrance road and rental car drop off lane to/from the parking lot. There are 155 spaces in the short-term lot, including six handicap spaces and ten rental car agency spaces.

Access to short-term area is controlled by two access gates, each equipped with a ticket dispenser. The first gate is accessible before passing the terminal building from the entrance road. The second gate can be entered from the entrance road after the passenger drop off area.

The exit to the short-term lot is controlled by another gate, which allows access through the long-term lot, to the payment booths. Short-term parking rates are as follows: no charge for 0 to 20 minutes, $2.00 for 21 to 40 minutes, $3.00 for 41 to 60 minutes, and $2.00 each additional hour with a $14.00 daily maximum.

Long-term Parking

Long-term parking is located adjacent to the short-term lot and across the entrance road from the terminal building. A painted cross walk provides access to/from the terminal baggage claim area across the entrance road and rental car drop off lane to/from the parking lot. There are 437 spaces in the long-term lot, including eight handicap spaces.

Access to the long-term parking area is controlled by two access gates, each equipped with a ticket dispenser. The first gate can be accessed from the entrance road when entering the main entrance of the Airport at the traffic signal at West 12th Street and Grace Street. The second gate is accessible before passing the terminal building from the entrance road.

Long-term Parking rates are as follows: no charge for 0 to 20 minutes, $3.00 for 21 to 60 minutes, $2.00 each additional hour, $11.00 daily maximum, and $66.00 weekly maximum. The exit to the long-term lot is controlled by gates at the payment booths.

Table 1-7: Airport Parking Summary

Parking Area Location	Total Spaces	Designated Handicap Spaces
Short-Term Parking	155	6
Long-Term Parking	437	8
Government & Media Lot (west end of terminal)	22	2
Rental Car Ready Lot (east end of terminal)	30	NA
Staff Parking (Gated Lot adjacent to Rental Car Building)	93	NA
Rental Car Service Building & Staff Parking	83	1
Rental Car Return (median island)	13	NA
Former NWS-NOAA Building	77	NA
North Coast Air (W. 12th Street)	35	NA
North Coast Air (Asbury Road)	43	NA

Source: Urban Engineers, Inc. field survey.

Miscellaneous Parking

There are 22 parking spaces located immediately outside the west end of the terminal building, which is referred to as the Government and Media lot. This lot is used by Senior ERAA staff, tenant managers, and visitors.

There are 77 parking spaces located near the former NWS-NOAA building. These spaces are used by the FAA, which has offices in the building, and also by rental car agencies for overflow parking.

There are 83 parking spaces available in front of the rental car service building and CBP building located west of the Government and Media lot. The section of the lot nearest W. 12th Street and rental car service building is used by the rental car agencies, while the section closer to the terminal and customs building is assigned to ERAA, FAA ATCT, and CBP.

There are 93 parking spaces in a gated lot southeast of the rental car service building. This lot is used by Airport and tenant employees.

Additionally, there is approximately 31,000 square feet of unstriped parking area behind the rental car service building for vehicle storage.

Rental car ready lot storage is available at the east end of the terminal building, adjacent to the ARFF/maintenance building, where 30 spaces are located, and 10 spaces in the short term parking lot. Rental car return uses a drop off lane along the median island in front of the terminal building and provides space for 13 vehicles.

1.5.3. Ground Access and Transportation

The following summarizes ground access to and circulation within the Airport.

Airport Access

ERI is on the south side of W. 12th Street (State Route 5), and has a signalized main entrance at Grace Street and a second entrance west of the main entrance. The Airport is accessible via two entrances from West 12th Street (State Route 5): at Grace Street (the main signalized entrance), and the west entrance, located 1,450-feet west of the main entrance. West 12th Street serves as a major east-west route through the Erie area and links the Airport to other major area roadways including Interstate 79 and the Bayfront Connector (State Route 290), which provide access to Interstate 90. A location map is shown in **Figure 1-1**.

The Airport road is a two-lane, one-way roadway. The main entrance directs traffic to the Airport road, parallel to W. 12th Street, and then merges with traffic entering from the west entrance. The roadway travels counter-clockwise toward the entrances to short and long-term parking, the rental car drop-off lane, and the terminal building. Before the road returns to the main entrance and traffic signal at W. 12th Street, traffic may reenter to the Airport road and recirculate to the various parking areas and terminal building.

Airport and tenant facilities are accessible from area roadways. The International Trade Building-FTZ, former Fenestra building site, and other Airport properties are located on West 20th Street, which intersects Powell Avenue and Marshall Drive on the east side of the Airport property. Asbury Road on the west side of the Airport provides access to FBO hangars and support facilities. Additionally, Hangar 20, which is a leased hangar located in the northeast quadrant between Runways 2-20 and 6-24, is accessible from Schenk Avenue.

Traffic Circulation

Traffic circulation and congestion on the Airport roadways is greatly impacted by the departure and arrival schedules of flights. During peak hours related to flight times, the Airport experiences congestion at the curb side drop off lanes in front of the terminal building. The drop off lane ends at the east end of the terminal building near the baggage claim, which causes additional congestion as vehicles attempt to enter the Airport roadway.

Peak hour congestion also impacts the rental car return lane located along the median island between the Airport roadway and short- and long-term parking lots. Currently there are 13 return spaces along the median. If the media island return spaces are full, returning customers must use the lots near the rental car service building requiring re-entry to the Airport roadway.

The Airport's short- and long-term parking lots share a common exit point at the gated payment booths, which has one automated lane and one lane served by an attendant. Traffic back-ups are common during peak hours due to the single exit point.

Although infrequent, there have been reported accidents as vehicles exit the parking lot onto the Airport roadway. The intersection between the roadway and parking lot exit is at a severely skewed angle, which makes sight distance somewhat difficult and potentially contributes to accidents.

Ground Transportation

The Erie Metropolitan Transit Authority (EMTA, the 'e') provides weekday and Saturday bus service to and from ERI. EMTA Routes 31 and 32 provide weekday service; Route 31 also provides Saturday and Sunday service. Bus routes begin and end in downtown Erie. Connections to other bus routes provide service to areas throughout Erie and surrounding Erie County suburbs.

Taxi service at the Airport is provided by Erie Yellow Cab.

The Airport also has an operating agreement with Uber to permit passenger drop-off and pick-up and use of common-use Airport roadways for access to the terminal area.

1.6. SUPPORT FACILITIES

1.6.1. Security

Airport security is provided by the Erie Airport Police and the TSA. The Erie Airport Police department is staffed by eight full time members, including a K-9 officer, and four part-time staff. The public safety office also includes a civil service officer. Airport police maintain a fleet of three vehicles.

ERI is surrounded by a perimeter fence with 20 secure entrance gates providing access to authorized personnel and vehicles to the airfield perimeter roads, aprons, taxiways, and runways. The perimeter fence is eight feet tall in all locations, except a section of fencing at the Runway 20 end along W. 12th Street, where a six-foot tall fence is installed due to an obstruction caused by the standard eight-foot height.

1.6.2. Fuel

North Coast operates fueling facilities from two fuel farm locations, the north farm located between hangars on W. 12th Street and the south farm located near the Asbury Road hangars between North Coast Air hangars and Erie Aviation.

The north fuel farms consist of two 12,000-gallon above ground tanks. One contains AvGas (100LL) and the other Jet A fuel. Other tanks include a 500-gallon diesel, 500-gallon gasoline, 275-gallon waste oil, and 300-gallon separator tank. Diesel and gasoline tanks are equipped with fuel pumps. All tanks are located in a concrete containment dike.

The south fuel farm consists of two 15,000-gallon above ground tanks containing Jet A fuel. All tanks are located in a concrete containment dike.

Fuel service to aircraft is provided by a 750-gallon AvGas truck and two 3,000 gallon Jet A fuel trucks.

The ARFF/maintenance building has a fueling station on site for fueling Airport vehicles and is described below.

1.6.3. ARFF and Maintenance Facilities

Erie's ARFF and maintenance staff share a combined facility located east of the terminal building. Federal Aviation Regulations (FAR) Part 139 regulations determine the ARFF index base upon air carrier aircraft length and number of daily departures. The ERI ARFF is an Index B facility and minimum equipment requirements defined in §139.317 require either:

- One vehicle carrying at least 500 pounds of sodium-based dry chemical, halon 1211, or clean agent and 1,500 gallons of water and the commensurate quantity of AFFF for foam production, or
- Two vehicles:
    - One vehicle carrying the extinguishing agents:
        - 500 pounds of sodium-based dry chemical, halon 1211, or clean agent; or
        - 450 pounds of potassium-based dry chemical and water with a commensurate quantity of AFFF to total 100 gallons for simultaneous dry chemical and AFFF application
    - One vehicle carrying an amount of water and the commensurate quantity of AFFF so the total quantity of water for foam production carried by both vehicles is at least 1,500 gallons.

ERI ARFF facilities and equipment meet the FAR Part 139 Index B requirements and include an incident command vehicle, structural fire truck, primary Oshkosh ARFF truck, and E-one ARFF truck. Vehicle designations are as follows:

- Mobile 822 – Structural Fire Truck
- Mobile 823 – Primary Oshkosh ARFF truck
- Mobile 824 – E-One ARFF truck
- Mobile 829 – Incident command vehicle

The Airport operations has a fleet of 22 vehicles including pickup trucks, snow plows, snow blowers, runway broom, street sweeper, mowers, paint truck, and other trucks and vehicles. Storage space in the ARFF/maintenance building is limited and many vehicles are stored outside.

The ARFF/maintenance building has a fueling station on site for fueling airport fleet vehicles. Two underground storage tanks (USTs) are located between the ARFF/maintenance building and Taxiway B and include a 6,000-gallon diesel fuel tank and 4,000-gallon unleaded gasoline tank. The ARFF/maintenance building emergency generator with a 214 gallon above-ground diesel tank is located nearby.

Additionally, several sheds and storage tanks are located near the northeast corner of the ARFF/maintenance building. The above-ground storage tanks contain runway de-icing fluids (potassium acetate).

1.6.4. Utilities

The Airport's infrastructure and utilities were reviewed. A summary of electric, gas, water, sewer, and storm sewer conveyance follows below.

Electric and Natural Gas

Penelec-First Energy is the electrical service provider at ERI and National Fuel Resources, Inc. provides natural gas service.

Water

Erie Water Works provides water service to ERI. The service connection to the water main is on West 12th Street, midway between the main and west entrances. The connection and meter are housed in an enclosure constructed in the median between the sidewalk and Airport road.

The International Trade Center building connects to the water main on West 20th Street.

Telephone and Internet

Velocity Network provides telephone and internet service to ERI.

Sewer

Sanitary sewer facilities at ERI are connected to the Millcreek Township Sewer Authority system whose flows are transmitted to the City of Erie Waste Treatment Plant. All sanitary sewers are gravity flow.

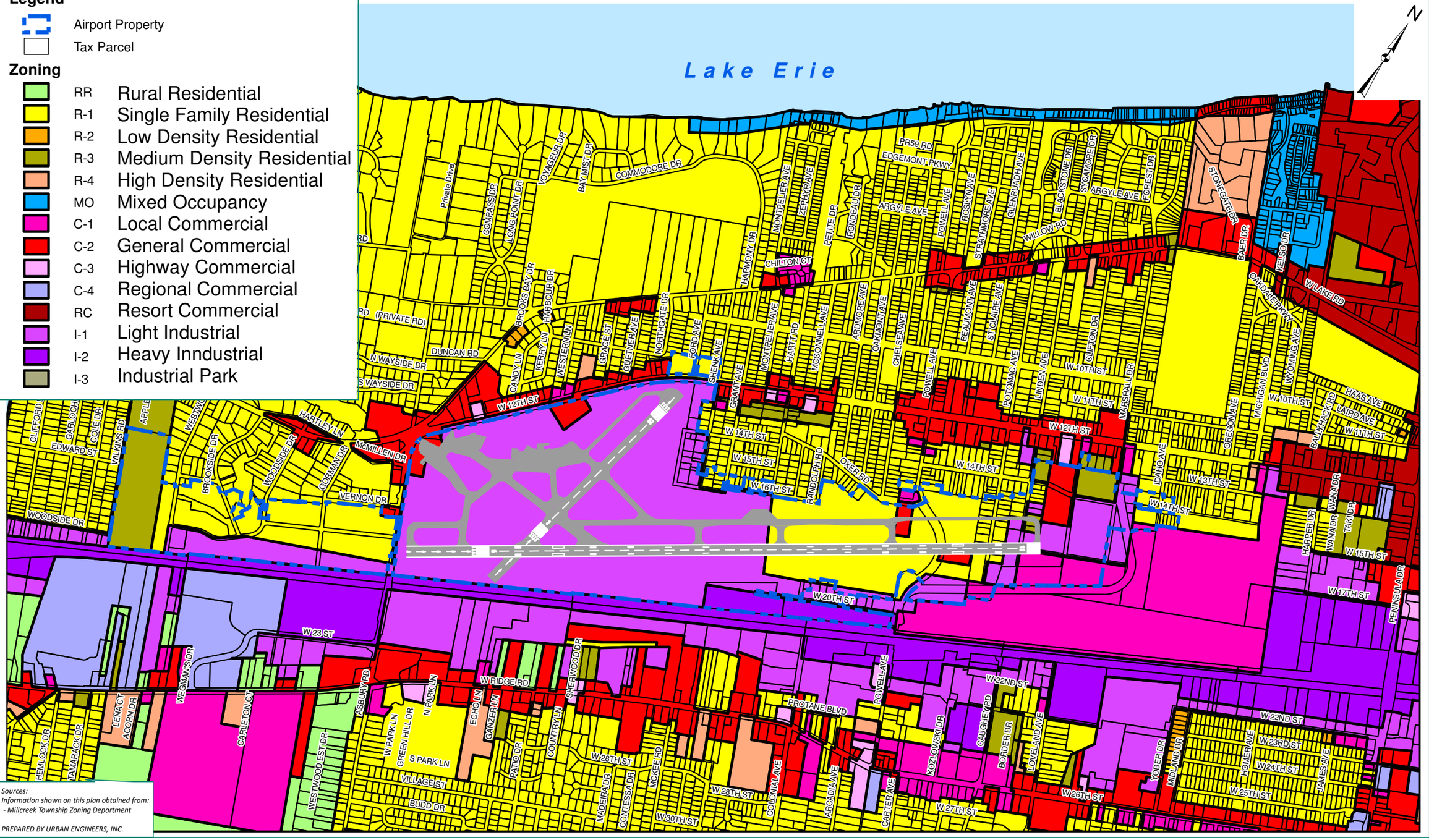
The de-icing fluid holding tank is connected to the ERI sanitary sewer system. The tank is permitted maximum discharge rate is 20 gallons per minute, per ERI's Significant Industrial User Sewer Use Permit (Permit No. NCU016).

Stormwater

Stormwater at ERI is collected by catch basins and swales that are connected to an extensive stormwater conveyance system with six outfalls locations. Four of the outfalls are located on the west side of ERI at Wilkins Run, a tributary to Lake Erie. The other two outfalls are located on the east side of ERI connect to the Millcreek Township storm sewer system at Linden Avenue and Marshall Drive and ultimately discharge to Lake Erie.

Stormwater management facilities associated with the Runway 6-24 extension project are located on the south side of W. 20th Street near Marshall Drive. Additionally, a section of stream was relocated during the runway extension and conveys runoff on the north side of Taxiway A and the south side of Runway 6-24 to the outfall at Marshall Drive.

Figure 1-16: Millcreek Township Zoning Map



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1.7. LAND USE AND ZONING

1.7.1. Land Use

ERI is located in western Millcreek Township, in Erie County, Pennsylvania. The area surrounding ERI is generally residential to the north and west, business and light industry to the east, and business, light industry, and heavy industry to the south along CSX and Norfolk Southern railroad tracks.

1.7.2. Zoning

The Millcreek Township zoning classification of ERI is Light Industrial, I-1. According to the Millcreek Township Zoning Department the I-1 light industrial district in Millcreek "is intended to provide a suitable environment to encourage development of light industrial enterprise by providing and protecting an environment exclusively for such uses, subject to standards which protect nearby residential, agricultural, commercial and public uses from hazards, noise and other disturbances." Millcreek Township has adopted an Airport Zoning Ordinance (Ordinance 83-2) to restrict building, structures, and trees within various zones.

Millcreek Township does not have an updated zoning map depicting the Runway 6-24 extension and its acquired property parcels at this time. The Township to date has not revised the zoning classifications of acquired parcels. **Figure 1-16** shows Millcreek Zoning Map at ERI and surrounding areas with Airport property and runways, taxiways, and aprons also depicted.

The other zoning classifications bordering ERI are defined by the Millcreek Township Zoning Ordinance as follows:

R-1, Single Family Residential: The R-1 Single Family Residential District is intended to preserve the character of existing single-family neighborhoods.

C-1, Local Commercial: The C-1 Local Commercial District is intended primarily for local convenient service areas and community facilities.

C-2, General Commercial: The C-2 General Commercial District is intended primarily for commercial areas containing those retail shops and services that serve more than "convenience-type" needs.

I-1, Light Industry: The I-1 Light Industrial District is intended to provide a suitable environment to encourage development of light industrial enterprise by providing and protecting an environment exclusively for such uses, subject to standards which protect nearby residential, agricultural, commercial and public uses from hazards, noise and other disturbances.

I-2, Heavy Industry: The I-2 Heavy Industrial District is intended to accommodate those industrial activities which may produce moderate nuisance hazards in areas that are relatively remote from residential development.